THE

# DUBLIN QUARTERLY JOURNAL

OF

# MEDICAL SCIENCE.

NOVEMBER 1, 1867.

## PART I.

## ORIGINAL COMMUNICATIONS.

ART. X.—*Surgical Reports.* By GEORGE H. PORTER, M.D., Univ. Dub.; F.R.C.S.I.; Vice-President Royal College of Surgeons in Ireland; Senior Surgeon to the Meath Hospital and County of Dublin Infirmary; Surgeon to Simpson's Hospital; Consulting Surgeon to the Coombe Lying-in Hospital; Member of Council of the Surgical Society of Ireland, and of the Pathological Society of Dublin; Lecturer on Clinical Surgery.

*A large Aneurism of the Right Sub-clavian Artery, treated by Acupressure on the first stage of the Axillary Artery, and, subsequently, by direct Pressure on the Arteria Innominata, unsuccessfully.*

PERHAPS in the whole domain of surgery there cannot be presented to the practical surgeon any disease more fraught with anxious care than sub-clavian aneurism. The dilatation of a large vessel in such close proximity to the heart, and consequently receiving a current of blood every instant with the greatest force, is a grave and serious fact. The almost inevitable termination either from rupture externally, followed by a fearful gush, or from its giving way internally and so flooding the patient's chest with arterial blood, or tearing its

course through the wind-pipe, or œsophagus, is a pregnant and solemn consideration. Then again the almost hopeless prospect when treatment is viewed through the gloomy experience of the past, is suggestive of deep responsibility. Daring attempts have been made under such terrible circumstances to save human life, and bold as well as ingenious have been the devices which have been adopted to cope with this formidable form of disease. Let us hope that the time may yet arrive when the more enlarged resources of art and science, and a riper experience shall contribute to aid the surgeon in baffling one of the most fatal maladies. I deem it incumbent meanwhile on the operating surgeon to record unsuccessful cases, as well as those which may terminate favourably. Much may often be learned from an unsuccessful result, and the following case, I doubt not, will be perused with interest, and acknowledged to be of a nature deeply practical and important.

Patrick Galvin, aged forty-three years, a labourer, was sent to me by my friend, Mr. Richard Graham, of Clonmel, and admitted into the Meath Hospital, June 11th, 1867. He was a strong healthy looking man, and said he had never been sick a single day, until fourteen months previously, when he noticed a small tumour above his right collar-bone. This swelling gradually increased, and the following symptoms were present on his admission to the Hospital:—A pulsating tumour about the size of a duck-egg, was seen above the right clavicle. It rested inferiorly on this bone, and its long diameter passed from the edge of the sterno mastoid muscle outwards to the extent of three inches and a half towards the trapezius. In the perpendicular direction it measured two inches and one-eighth. It had a strong eccentric pulsation, but was at the same time very compressible. There was no pain in the tumour. The external jugular vein was much distended in the neck above, and half way over the aneurism. There was a loud *bruit de soufflet* audible in the tumour, and extended towards the arch of the aorta. The radial pulse was much weaker than that on the left side. He felt numbness and slight pain in his forearm and hand, chiefly along the inner edge. His right hand was always a little colder than the opposite one. At the upper, and inner part of the dilatation, one spot appeared much thinner than the remainder of the sac. The man was not aware of having ever met with any injury, but had always worked very hard. When the tumour first attracted his attention it was not larger than a small nut, and he could make it

disappear by pressure with his finger. He had been for six weeks in another hospital in this city, where pressure on the tumour had been tried, but without benefit. He also had a small aneurism of his right femoral artery just below Poupart's ligament. His muscular system was in a good condition on admission. He slept well, and had an excellent appetite. His spirits were not in the least depressed; but on the contrary his manner was cheerful, and hopeful. He was well aware of the serious nature of his malady, and entreated that if there was any chance of relief by an operation to give him that chance. With all the foregoing elements in the case it will be admitted that it was a most anxious, and most trying one. I had frequent consultations with my colleagues, to whom individually, and collectively, I tender my grateful thanks for the assistance they gave, and for the deep interest they manifested in the conduct of the case. Everything seemed unpromising. The serious complications of the second aneurism, and the probability of disease being present in the man's aorta rendered the case almost hopeless. Then again the idea of ligaturing a vessel at either the cardiac, or capillary side of the tumour, carried with it the dread of secondary hemorrhage. It occurred to me that this was a legitimate case, in which I might attempt the occlusion of the artery by acupressure at the distal side. Accordingly, with the sanction of my colleagues, I determined to lay bare the axillary artery in its first stage, place a needle under it, and bridge over the vessel with a loop of wire.

*Operation.*—June 26th, 1867, at 10 o'clock a.m. I had the patient brought into the operation theatre. He was placed on the table with his shoulders slightly raised, and a strong light falling on him from above. My valued colleague, Professor Macnamara, at my request, administered chloroform in the most efficient manner. His right arm was held from his side in order to put the great pectoral muscle on the stretch. Laying my scalpel over the junction of the great pectoral and trapezius muscles, I made an incision inwards to the extent of four inches, at a level of half an inch below the clavicle. With a few careful strokes of the knife I laid bare the fibres of the great pectoral. I then, at the inner extremity of the wound, cautiously cut through the muscle to the extent of half an inch. Thrusting in the point of my right forefinger I insinuated it outwards under the muscle until I came to the space marking its junction with the deltoid muscle, tearing through with my nail. Having withdrawn my finger along the traget made by it, I passed

a broad director beneath the muscle, and when its extremity appeared on it I divided the muscle throughout the entire length of the first incision. A small artery required a ligature. The lips of the wound now separated a good deal, and were kept still more widely apart by means of a retractor. After tearing through some areolar tissue with a director, the edge of the pectoralis minor came into view, and, just above it, the acromial artery was seen, and felt so large, that at first I thought it was the axillary. The brachial plexus was distinctly visible above and outside, and merely the edge of the axillary vein could be distinguished on the inside of the artery. I now had the arm brought to the side, and after a little cautious scraping with the director, but more with the nail of my left forefinger, I brought the axillary artery into view, and insinuated an aneurism needle under it. I then took a silver probe with the little bulbous extremity taken off, and well rounded. I curved it slightly, and having withdrawn the needle, I attempted to pass the probe under the artery. Finding this rather difficult, I introduced it along the groove of a director bent almost to the curve of an aneurism needle, which I passed beneath the artery. I then placed a loop of silver wire on the extremity of the probe, and bridged it tightly across the artery, after the manner of Sir James Simpson's fourth mode of acupressure. I gave the wire three twists round the probe. This immediately obliterated the pulse at the wrist, whilst the aneurismal tumour diminished nearly one-half in size, and its pulsation was weaker. I placed the probe lying obliquely with its free extremity projecting at the internal angle of the incision. The edges of the wound I brought together with three points of silver wire suture, and a compress of lint, secured with adhesive plaster, kept the lips in apposition, and protected the probe from any rude or sudden shock. A flannel bandage was then applied from the hand to the axilla, his arm was kept to his side, and he was removed to bed. He was ordered an anodyne draught, and a small bladder of ice was in a short time afterwards placed on the tumour. In an hour after the operation he complained of a feeling of tightness in his forearm, and begged that his hand, which had been secured across his chest, might be liberated.

Two o'clock p.m.—The bandage confining his hand was removed, which gave him much relief. He had a little sleep since the operation, and was in good spirits. No change of temperature was noticed in the limb.

June 28th.—He passed a very good night. The radial pulse was

felt faintly. The tumour was reduced much in size; the pulsation was weaker, and the *bruit* in the aneurism was two-thirds shorter. The aortic *bruit* had almost disappeared. Half-past three o'clock, p.m., just fifty-three hours after its application, I removed the probe and wire, and not a drop of blood followed.

June 30.—The tumour continued in much the same condition, especially as to size. It was decidedly more firm, the pulsation being transmitted to the finger, evidently through a thicker stratum of fibrin. A small chamois bag containing shot was kept on the aneurism, alternately with a bladder of ice, and the wound was healing fast. The history of this case from day to day would be tedious. The tumour again appeared to enlarge, and the pulsation to grow as strong as at first. The only marked change being a greater amount of solidity. The wound was perfectly healed on the 17th of July, and the man was out and walking about the grounds of the hospital.

Here was a case abounding in difficulties. The disease was not cured. But still, although very much was not to be hoped for, owing to the free collateral circulation, the stoppage of the current of blood on the distal side was a perfectly warrantable procedure. The needle and wire were removed without damaging the artery, and secondary hemorrhage was thus avoided. His health had not suffered in the least by the operation, and as far as one could judge he was very much in the same condition as he had been before, and the disease was as likely to progress to a fatal termination. Deep was the anxiety with which the case was now regarded. Every circumstance connected with it I carefully weighed; and gave the most thoughtful consideration to his present condition and to future contingencies. Amputation at the shoulder joint; injection; galvano-puncture; manipulation; the introduction of numerous coils of fine wire, were all discussed, and laid aside. Now there only remained the chance of shutting off the circulation on the cardiac side. The ligature I made up my mind not to use, but the idea of acupressure, in some form, I felt disposed to adopt. Then the difficulty arose of diagnosing accurately the portion or stages of the subclavian artery actually invaded by the disease. It appeared on careful examination that the first stage of the artery was sound, and the arteria innominata, as well as I could judge, not enlarged. I had no former case of success to encourage me as far as dealing with the first stage of the subclavian was concerned, as all had been fatal with the ligature, and even to cut down upon it, and place a

needle under that portion of the artery, was an operation hazardous in itself. Sir William Fergusson, when speaking of deligation of the subclavian artery in its first stage, certainly condemns it. He says, "Taking into consideration the want of success attending this operation, it may well be deemed a serious question, whether it should again be attempted; for my own part I should do it with great reluctance." Liston was also unfavourable to it. He says, "There is little chance of coagulum forming on either side of the obliteration caused by the ligature." Having, however, carefully and anxiously weighed every feature in the case, and having been aided by the kind counsel of my colleagues, I determined to lay bare the arteria innominata, and if I found it not diseased, to give the man the chance of stopping the current of blood in it by temporary pressure, and thus allowing time for a possible coagulation to take place in the aneurism; but if, on the other hand, I found it in a diseased condition, to close the wound, as had been done by my father, Aston Key, Post, and Hoffman. I was also encouraged to deal with the innominata instead of the first stage of the subclavian by the fact that a case of successful deligation of this vessel was performed by A. W. Smyth, of New Orleans, in May, 1864. Then again Guthrie (no mean authority) in his work on *The Diseases and Injuries of Arteries*, when speaking of the cases in which Mott and Graefe had tied the arteria innominata, says, "It is evident from these last cases, that a man may live so long after the operation as to show that he does not die from the immediate effects of it, or from any that must necessarily take place; and it is, therefore, probable, that if the operation be repeated it will ultimately be successful, although it must always be exceedingly hazardous." Liston also, when comparing the operation of tying the first stage of the subclavian and innominata, in the following language prefers the latter:—"If aneurism of the right subclavian is so situated or so large as to render impracticable the application of a ligature outside of the anterior scalenus, then it will be a safer and a better practice to deligate the anonyma than to attempt the ligature of the subclavian close to its origin, and amidst the numerous branches given off from it." To add another authority which helped me to decide upon placing pressure on the arteria innominata, I may quote the following passage from Simon's able article "Neck," in Todd's *Cyclopædia of Anatomy and Physiology*. Referring to the arteria innominata, he says:—"This artery has now been tied for the cure of aneurism at least six times; unsuccessfully, it is true, but with such nearness of success

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Fig I.

Fig II.

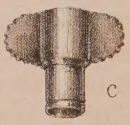
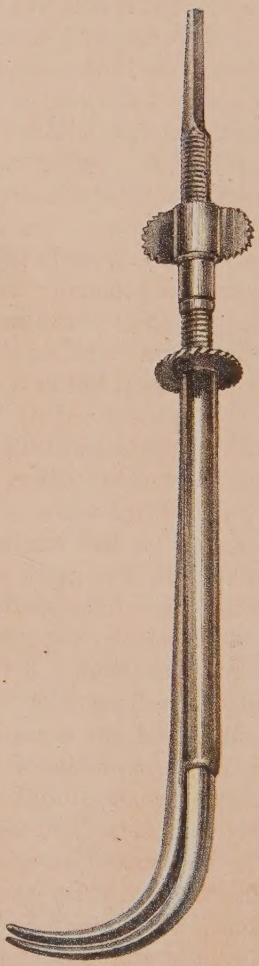


Fig III.



as not to forbid cautious repetition." The great want of success with others was not sufficient to deter me. Surely the fact that there never was a successful case of this operation should not prevent the surgeon from attempting to save, or prolong life. The experience of other great operations, which were apparently hopeless, gave some encouragement. Having determined to operate, the next question of importance was to select the mode of pressing the artery. I felt that it would be impossible to pass an acupressure needle under the arteria innominata, which is placed so deeply and behind the sternum; but it occurred to me that the instrument suggested by Dr. L'Estrange, and described by him in the *Dublin Medical Press* for June 7th, 1865, would accomplish the object I had in view. I have given a drawing of it, Plate II. It resembles an ordinary aneurism needle without an eye, and having a movable handle, Figure I., A. After the artery is denuded this can be passed beneath the vessel like any other aneurism needle. When fairly in its proper position, the handle is removed and the second blade, Figure II., B, is made to slide down on the artery somewhat in the manner of a lithotrite, and then the screw-nut, Figure II., C., is put on the shaft of the needle, and by it the blades of the instrument can be approximated to the desired extent. Figure III. shows the compressor as it lies in the wound on the artery.

*The Operation.*—July 31st, at ten o'clock, a.m., the patient was placed on the table in the operation theatre. His shoulders were raised about eight inches, and his head thrown well back. A strong top light fell upon him. Professor Macnamara administered chloroform, as he had kindly done for me at the former operation. Standing on the right of the patient, I laid my scalpel on the anterior edge of the sterno-mastoid muscle of the right side two inches above the sternum, and carried my incision to the centre point of this bone. I then placed the point of my knife on the clavicle at a distance of two inches from the inferior extremity of the first, and cut inwards to meet the former incision at an acute angle over the middle of the sternum. Just as I joined the two incisions a small artery bled smartly, but was immediately secured by my assistants. The triangular flap of skin and platysma enclosed by the incisions, I now carefully dissected up, raising it with great caution where it lay over the internal portion of the aneurismal tumour. I then, with a director, scraped through the sternal origin of the right sterno-mastoid muscle, or rather between the origins of both right and left muscles, and pushed the director outwards under

the sternal and clavicular portions, which I divided on it, as it was kept tightly against the back of the muscle. One of my colleagues now held the divided muscle out of my way. Some areolar tissue came into view, which I cautiously pushed to either side with the handle of my scalpel. I now came down on a strong fascia, which I pinched up with a forceps, and scraped through with the director, which I insinuated beneath, and slit the fascia on it to the full extent of the incision along the collar bone. Another small vessel now sprang, but was tied quickly, the wound having been well sponged out. I then passed a director under the sternohyoid and sternothyroid muscles, and divided them. Some veins were thus exposed, but were kept out of danger. I now scratched through the inner side of the sheath of the carotid artery, which I felt beating strongly under my finger. I was now working in a deep cavity, and low behind the sternum. At this stage of the operation my colleague, Mr. Wm. Stokes, aided me greatly by throwing a strong reflected light, with the mirror of an ophthalmoscope, into the wound. Carefully tearing with the nail of my left fore finger, and occasionally using the director, I traced along the carotid, and brought the innominata into view. The left vena innominata was full, and bulged up in my way, but it was held down cautiously with a small silver retractor. I now altogether used my nail, and cleared the vessel from the trachea; this I found much more easy than isolating it on the outer side—in fact, this part of the operation I did altogether without seeing it, I was so far down behind the sternum. Having safely laid bare the artery, I attempted to pass L'Estrange's needle under it from without inwards, keeping its point close to the vessel, but I found I could not depress the instrument, as it hitched on the sternum and end of the clavicle. I now changed my position from the side of the patient, and stood above his head, which I had thrown more back, thus bringing the artery higher. I now found that I had considerably more power over the instrument, and I passed it slowly and carefully round the vessel. I then removed the handle, and passed down the second part of the instrument on the artery, and screwed it slowly home by means of the little nut. The pulsation in the tumour became weaker and weaker as the blades were approximating, and at last ceased when they were brought closely together. The aneurism reduced very much in size. The patient bore the operation well, and did not suffer the least inconvenience from shutting off the current of blood from that side of his head. The edges of the wound were brought

together with four points of wire suture, and a pledget of wet lint was laid upon it. The instrument stood out at the junction of the two incisions. The man wanted to be allowed to walk to his ward, but, of course, was not permitted. He was placed in bed, and a small bag of ice was put on the tumour. The operation occupied forty minutes from its commencement to the passing of the needle beneath the vessel, the first time, I believe, that such a procedure was ever accomplished on the living subject in Ireland. I must pause here to express my admiration of the manner in which, for nearly an hour, the poor patient was kept safely in a state of anesthesia. This man was known to have a second aneurism; disease of the arch of his aorta was suspected; there were proofs enough consequently of derangement of his arterial system; and with all these unfavourable circumstances, he was safely carried through the operation in a state of anesthetic sleep. In an operation requiring time, and careful dissection in the midst of large vessels, it was all-important to have the state of insensibility complete; and this case verified, in the amplest manner, the statement of Professor Macnamara, in his valuable work on "Medicines, their Uses and Modes of Administration." He says in the article on chloroform:—"The debilitated and weak, either in consequence of age or disease, bear its administration better than the robust, whilst, so far as disease is concerned, my experience agrees with that of Snow, that no matter whether it be disease of the brain, lung, or heart, if its administration be required by the emergency of an operation, a fatal result is less likely to follow its administration, than from the shock under such circumstances of a capital operation when the patient is not under its influence."

12.30 p.m.—He complained of pain in the dorsal region of his spine, which was relieved by placing a small cushion under it. He also felt pain in swallowing, and said there was a "great catch" where the instrument lay. His breathing was perfectly free. His pulse 84, and the *bruit* had disappeared from the tumour.

3 p.m.—A slight pulsation was felt in the aneurism. Bladders of ice were kept constantly applied to the tumour.

August 1st.—He slept several hours during the night. He still complained of pain when he swallowed. The tumour was harder and smaller, but still had a decided pulsation. One p.m.—I screwed the instrument tighter, which arrested the pulsation. 10 p.m.—Pulsation had returned.

August 2nd.—Slept six hours without being disturbed. Still

complained of pain in swallowing. His spirits were excellent. The wound looked most healthy. Tumour pulsating. Small bladders of shot and ice were placed occasionally on the tumour. Appetite good. 9.30 p.m.—The instrument was removed; the blades having been separated, it was easily turned out of the wound. Not a drop of blood followed, but the pulsation returned immediately to the same extent as before the operation. The tumour was certainly more firm, but resumed its former size. The pain in swallowing ceased almost immediately. The ice and shot were kept to the swelling. He was ordered a mixture containing acetate of lead in large doses.

August 4th.—No change in symptoms, and it would be tedious to relate his daily condition.

August 9th.—The wound is healing in a most healthy manner. The tumour in the same state. He has become restless, and when the nurse left the ward he got out of bed, and went to the water closet. 9.30 p.m.—The patient sat up in his bed, when a gush of arterial blood burst from the wound. The resident pupils were with him almost immediately, but they found that he had lost a large quantity of blood. They instantly plugged the wound with sponge, and sent for me. I saw him a few minutes before ten o'clock. The bleeding was perfectly arrested when I arrived. I merely, with the assistance of my colleague, Mr. Wharton, added to the size of the sponge compresses, and fastened all on with adhesive plaster and bandages. Ice was kept over the tumour, and the upper part of his chest. He was ordered a full opiate.

August 10th.—Slight returns of the hemorrhage occurred during the day, but were easily restrained. 8.30 p.m.—A violent gush of bleeding took place, sweeping away all the plugging, and he expired immediately.

*Post-mortem examination.*—Fourteen hours after death. His chest was carefully opened, and the apex of the right pleural cavity was found to be perfectly healthy. His lungs were also in a normal condition. His heart was somewhat large, and felt a little softer than was natural. The arch of the aorta was larger, but not dilated into any aneurismal pouch. A few atheromatous specks were visible on its lining membrane. A portion of the arch, together with the origin of the vessels from it, was removed; as also the right subclavian artery, together with the aneurism, and a portion of the axillary artery. The drawing, Plate I., fairly represents the parts concerned. A little sloughy aperture *a*, just below the bifurcation

into right carotid and right subclavian, marks the source of the fatal hemorrhage. In the tumour some layers of fibrin were observable. At the point where the acupressure was applied to the axillary artery the vessel was not completely occluded, but narrowed. The head and abdomen were not opened. From the examination of the parts, I arrived at the following conclusions:—Firstly, that the return of the pulsation in the tumour arose from the slipping of the artery from the jaws of the compressor, forming in consequence a small channel through the vessel beyond the extremities of the blades. Secondly, that by screwing the instrument tightly to arrest the current of blood, I made undue pressure on the anterior portion of the artery, and thus produced the slough. Thirdly, that an artery may be *acupressed* for several hours with perfect safety. Fourthly, that the blades of the compressor were too short, and not sufficiently curved for a vessel of this size. As to the compressor, I am convinced that it is really a good instrument, devised on a good principle, and I believe it will ultimately succeed in curing aneurism. If no slipping of the artery take place, a very slight amount of pressure is sufficient to arrest the current of blood; and I believe if I had merely passed an ordinary aneurism needle under the artery, and looped over the vessel with a piece of wire, the result would have been favourable. I cannot conclude without expressing my best thanks to my apprentice, Mr. E. J. Cooke, and the resident pupils of the hospital, Messrs. Lough and Crosslè, for the unwearied attention and assiduity they bestowed on the poor sufferer.

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Art. XI.—*Reports of Hospital Cases:—On a Case of Injury of the Spine in the Cervical Region.* By William Mac Cormac, M.A., M.D.; Fellow of the Royal College of Surgeons, Ireland; Surgeon to the Belfast General Hospital.

The great divergency of opinion subsisting amongst surgeons as to the propriety of trephining the spine in cases of injury induces me to make known the history of the following fatal case of fracture of the spine. I believe that the conclusions which the *post-mortem* examination suggests show that, in this instance at least, an operation could not either have prolonged or preserved life.

Although, no doubt, it must prove much more gratifying to record some successful surgical achievement, nevertheless, unsuccessful cases frequently yield an amount of instruction, and present features of interest, which successful ones do not and cannot always possess. No sense of false shame, therefore, should prevent surgeons from making public the unsuccessful issues of their efforts when they occur, at least as frequently as they do those that are successful.

Robert Crawford, a fine healthy looking young man, thirty years of age, was admitted to hospital under my care on the evening of the 15th August.

My colleague Dr. Browne happened to be present at the time. He found Crawford in a state of complete intoxication and unable to give any account of himself. It was consequently impossible to discover the nature or amount of the injury which the patient had sustained. Nor was it possible, at the time, otherwise to ascertain satisfactorily the particulars of the accident. The police who brought Crawford to hospital had not witnessed the occurrence, and as for the sufferer himself, being drunk, he could tell nothing about it. It subsequently appeared, however, that Crawford was sitting on two barrels which were placed in the cart he was driving, and that he fell sideways off these, turning a sort of summersault in the air, alighting on the ground on his back, clear of the wheel which, it is stated, did not pass over his neck.

When I visited my patient and inquired where he was hurt, he merely replied that he was bruised and sore, and stiff about the neck. I believed I had but to deal with a simple case of contusion, drunken men being rarely badly hurt. I was much surprised, however, on turning down the bedclothes, to find no trace of external injury whatever, but instead thereof a prominent swelling in the hypogastrium, and the penis in a state of priapism. The patient then informed me, in reply to my question, that he had made no water since he was hurt. This circumstance, along with the priapism, immediately aroused my suspicions, and I ascertained that the man was all but completely paralysed. The distended bladder, which reached nearly as high as the umbilicus, was at once emptied, the introduction of the catheter being attended with considerable difficulty on account of the erect condition of the penis, which was complete and persistent.

On examining the lower extremities, they were found wholly deprived of the power of motion, and absolutely without sensation. The trunk, also, as far up as the level of the fourth rib was in a

similar condition, and it was possible to trace out a sharp line of demarcation, as regards sensibility, by pricking the chest with a pin. The arms, too, were partially paralysed, the left slightly more so than the right. Along the ulnar border of each forearm the amount of sensation was much impaired, whilst on the radial side it seemed normal. Every attempt to excite reflex movements of the lower limbs proved unsuccessful, or was only responded to by a faint motion of the great toes. In fact the inferior extremities might almost literally be described as dead. The respiration was slow and laboured, and chiefly, if not entirely, diaphragmatic. The pulse was regular. But what seemed to me most extraordinary was the complete unconsciousness, on the part of the unfortunate man, of the great injury which he had sustained. His intelligence otherwise was unimpaired, and yet he made no complaint save that he felt a little sore. He was quite unaware that more than half his body might be said not to belong to him, and was with difficulty made to understand that he had met with a very serious accident.

Of course such symptoms as those described pointed clearly enough to an injury of the cord pretty high up. But when I endeavoured to localize the seat of the lesion, by an external examination, my difficulties began. The dorsal vertebræ showed no sign of displacement, nor were they tender on pressure, except the first, which during life was mistaken for the *vertebra prominens*. Immediately above the first dorsal vertebra was felt a slight depression, so slight, however, as to make one feel uncertain about its reality, as the patient was a very muscular man with a short neck. At this point excessive pain, stretching down the arms, was excited by pressure, and in the region of the fifth and sixth vertebræ there was also excessive tenderness. Every attempt at examining the spine occasioned much distress, and whenever the head had to be moved the patient grasped it with both hands in order the better to support it. It was therefore felt undesirable to subject the poor man to more frequent or lengthened examinations than were absolutely necessary.

Under such circumstances an exact diagnosis was necessarily somewhat difficult. I believed, however, that it was most probable that in the region where the pain on pressure was most acutely felt, there was fracture with compression of the cord. The position of the fracture at the time appeared to be about the sixth cervical vertebra, but on examination after death it proved

to be the seventh. What I was unable at the time satisfactorily to solve, was whether or not the injury was limited to one vertebra, or extended over two or more, an important element for consideration both as regarded the prognosis and treatment of the case.

In most respects the symptoms resembled those of similar cases. The urine, as early as the fourth day, became ammoniacal, and was afterwards excessively fetid. At first there was complete retention, but subsequently both urine and feces, the former often largely mixed with blood, came away involuntarily. In the earlier stages of the case there were no general symptoms of very great urgency. The appetite was unimpaired, the patient slept well, and complained of nothing. On the sixth day, however, vomiting set in, accompanied by flatulent distention of the stomach and bowels, and troublesome cough, with difficult expectoration. For a week the paralysis remained unchanged in amount, but then the power of grasping with the hands became feebler, and the patient complained of pain stretching down the ulnar border of each forearm. In the lower limbs there was no change, as they were absolutely bereft of power and sensation from the first. The face, or cheeks rather, now became much flushed, and remained so—a fact which has been explained by the occurrence of partial paralysis of the sympathetic. Nothing remarkable was observed with respect to the temperature. In the axilla, a clinical thermometer registered the temperature at $101°\frac{4}{5}$ Farenheit, and between the thighs at $100°\frac{4}{5}$, one degree less in the paralysed than in the only partially paralysed parts. The man, too, was now becoming decidedly weaker.

It was at this period, a week after the accident, that I took into consideration the propriety of trephining the spine, an operation ably advocated in the pages of this Journal by Dr. Robert M'Donnell. I was, nevertheless, dissuaded from doing so, partly because the experience of my colleagues rendered them opposed to the practice, partly because the nature of the symptoms led me to suspect a serious lesion of the cord, but chiefly on account of the difficulty of attaining to anything like certain knowledge of the exact nature and amount of injury that had been sustained.

It cannot now be a matter of much regret, when the result of the *post-mortem* examination is apparent, that I did not adopt the more active mode of treatment. But, if only for this reason, as also because this history supplements, in a certain measure, some of the facts and observations adduced by Dr. M'Donnell in his admirable and exhaustive papers, I thought it not undesirable, in the present

somewhat divided state of surgical opinion on the subject, to bring forward an account of this case.

Crawford lingered for an unusual time. Death did not take place until the fourteenth day after the accident. His progress downwards was very gradual. What troubled him most was the accumulation of mucus in the chest which he could not expectorate. The intelligence remained unclouded to the last. It was observable that during the three last days of life the pulse fell each day some five beats in frequency. The treatment really consisted in simply doing nothing.

Seventeen hours after death the *post-mortem* examination was made by myself in the presence of the hospital pupils. In the first instance, I went through the steps of the operation which I would have performed had I interfered surgically during life. An incision having been practised, four inches in length, over the lower cervical vertebræ and the first dorsal, I was, I must confess, surprised at the facility with which the spine was exposed. In the centre of the wound I felt the spinous process of what turned out to be the seventh cervical vertebra, loose and depressed beneath the general surface for fully two lines breadth. Before taking away this fractured portion, which could have been very readily done, I preferred removing the entire spine, or a considerable portion of it, in order that the parts might be preserved in exact relationship, and examined at leisure. Before doing so, however, I ascertained by passing my hand along the front of the spine that the anterior common ligament was uninjured, and that there was neither inequality nor displacement of the bodies of the vertebræ in that situation. The spinal column, with a portion of the ribs attached, was now carefully taken out as low as the middle of the dorsal region. The fractured spinous process was then seen to have been thrust into the intervertebral opening between the seventh cervical and first dorsal vertebræ, as represented in Fig. 1. It was more deeply driven in on the left than on the right side, and the tip of the spine was depressed, and rested upon the process underneath. As might almost be imagined from the wedge-shaped form of the fragment, the spinal marrow had been compressed, and, as a further examination disclosed, almost to complete division. The poor man was in fact "pithed," nearly as effectually as when the bull is stricken by the matador in the arena.

The fractured spinous process having been removed, the dura mater was seen occupying the exposed space, and apparently quite

uninjured. It betrayed nothing as to the vitally altered condition of the medulla underneath. The vertebral arches, excepting the injured one, were now sawn through and removed. Above the seat of injury the cord seemed entirely normal. Below, indeed, it appeared smaller than was natural, and the veins were slightly congested. Above and below the injured point, where a distinct sulcus could be detected, some lymph and a small clot had formed, which are shown in Fig. 3. The cord and its membranes were now carefully removed, and the latter dissected off in front, when it was ascertained that the medulla was lacerated, but no marked inflammatory softening was detected, nor were there any signs of meningitis. I had now an opportunity of again examining the spinal column, and there was not the smallest displacement of the bodies either in front or behind, but the intervertebral substance between the last cervical and the first dorsal vertebræ was much torn, and there was preternatural mobility between these two bones.

Professor Redfern was good enough to examine the cord for me after it had been a few days in spirit. He divided the dura mater posteriorly, and made the longitudinal section which is faithfully represented in Fig. 3. He wrote to me to say that "further examination has added to the certainty that the structure of the cord is entirely destroyed at the injured spot. Inflammatory changes occur within that spot, but I have failed to trace them any distance along the cord either upwards or downwards. I repeat what I said yesterday, that, in my opinion, an operation would have made this case worse."

On examining the longitudinal section made from before backwards by Professor Redfern, the crushed portion of the cord is seen to be injured beyond all possibility of repair. A few filaments, as it were, alone connect the upper and lower tracts of the medulla.

The rest of the body, upon inspection, displayed nothing of particular importance. The head was not opened; but the dependent portions of the lungs were almost solidified, owing to hypostatic congestion.

The woodcuts with which these observations have been illustrated are very accurately drawn of the actual size. Fig 1. is a side view of the spine, representing the degree to which the broken fragment was driven in. Fig. 2. represents this fragment separate, and Fig. 3. represents the longitudinal section of the medulla, and shows very faithfully the extent to which the cord has been divided.

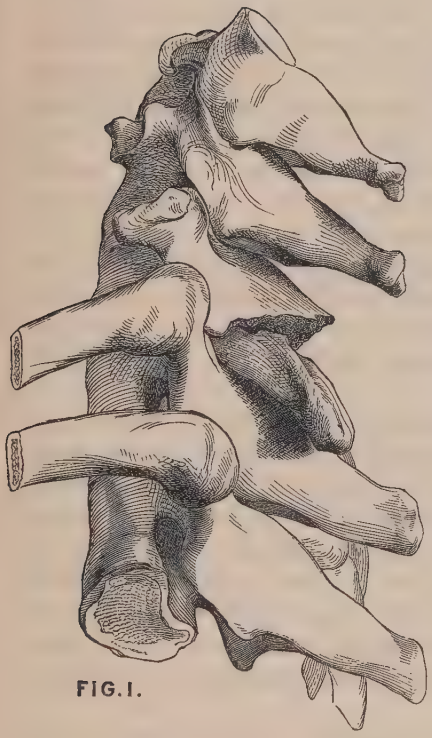

FIG. 1.

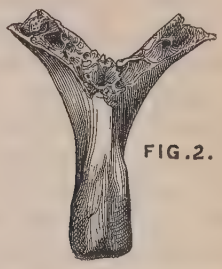

FIG. 2.

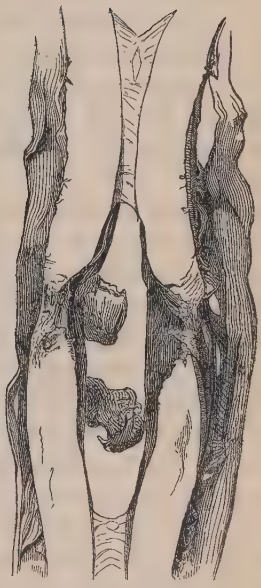

FIG. 3.

The history of this case presents, I think, several points of practical moment. In the first place, although the vertebral arch remained entire, and only a small portion of the laminæ of the vertebra was detached with the spinous process, and there was no displacement by fracture or otherwise of the bodies, the nervous matter of the cord was damaged beyond all possibility of repair. An operation in this case, otherwise apparently well suited for it, must have completely failed, and there would have been nothing

during the course of the operation to indicate any cause for failure. The length of time the patient lived, after so severe an injury to the cord in the cervical region, and the very trifling inflammatory changes resulting, whether in the cord itself or in its membranes, are certainly uncommon. The almost total absence of reflex motion in a case of such complete division of the medulla was also very unusual, and there was nothing discovered which could in any way account for its non-existence. In this instance, at all events, it could only have led to disappointment, had this circumstance been looked upon as, in itself, yielding a motive for operation, as Dr. M'Donnell seems to consider it.

In conclusion, the tendency of this case, I conceive, is only the more strongly to show that even comparatively slight injuries of the bony case may be accompanied by total destruction of the important organ it contains within. At the same time, I would by no means wish to lay down that an exploratory operation or examination, in cases of paralysis following injury of the spine, is uncalled for or unjustifiable. If it can be proved, and I think it has been, to a certain extent, proved, that in some of these cases surgical interference has been able to effect a permanent and striking amelioration, if not a perfect cure, and that an operation is not necessarily dangerous to life, then it is, I would say, perfectly legitimate to attempt by these means to give the patient that chance of life which, by the plan of simply letting him alone, he is all but certain to lose.

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ART. XII.—*On Some of the Morbid Conditions of the Optic Nerve; as seen by means of the Ophthalmoscope.* By HENRY WILSON, F.R.C.S.; L.K. & Q.C.P.; Member of the Royal Irish Academy, &c., &c.

THE optic nerve is rarely the seat of primary and independent disease. It is, as a rule, secondarily affected in consequence of disease in the adjoining ocular structures, or of the brain, and is most frequently seen co-existing with disease of the retina. In the present paper I purpose confining my remarks to the optic nerve alone.

A number of *congenital peculiarities* of the optic nerve have been

recorded before the invention of the ophthalmoscope, such as fusion of the two nerves into one in cyclopia; in a case of complete absence of the right globe the left optic nerve was bifurcated, one branch normal, the other going to and terminating in the dura mater; in absence of the globe the optic nerve may be altogether absent, or only deficient from the optic commissure outwards; the optic commissure has been found wanting in microcephalus and hemicephalus, and also in otherwise normal heads and brains. The intra-cranial ends of the optic nerve have been found free and unattached to the brain, lying in the sella turcica; variations in the length and the diameter of the nerve have been recorded; in hydrocephalus the optic, as well as other cerebral nerves, has been found deficient of its nervous elements, and consisting simply of neurilemma; one of the most curious observations is that of the existence of a retina, without an optic nerve, in a dog with cyclopia. Congenital atrophy of the nerve is frequently mentioned. The congenital anomalies of the optic nerve recorded, as seen by means of the ophthalmoscope, are: atrophy, abnormal insertion in one eye, absence of, or misplacement of its vessels, coloboma of the nerve or of its sheath. Abnormal insertion of the nerve into the globe is classified by Desmarres as amongst "the principal maladies of the optic papilla;" it gives rise, he says, when the second eye is sound, to amblyopia with strabismus, which may be cured by suitable treatment. This anomaly must be very rare, and further observations beyond Desmarres' statement, and one somewhat doubtful instance recorded by v. Graefe, are, I think, necessary to establish its occurrence. I look upon the cases of recorded absence of the central vessels as ones of complete atrophy. The vessels, instead of appearing at or close to the centre of the disc, may project near its periphery, and there may be, instead of one principal arterial and one venous trunk, several, as the vessels may break up into branches within the nerve instead of on its intra-ocular surface. Part of the disc may be occupied by a white patch which extends into the retina; or there may be spots of black pigment on the disc; the outline of the disc may be irregular and angular, and may vary from the usual circular shape. With coloboma of the iris is sometimes also coloboma of the choroid, retina, and optic nerve, or its sheath; this coloboma is easily recognized as a white, irregularly oval or pear-shaped figure, extending from the pheriphery to the optic papilla, part of which it may include.

As the exterior of the eye is scarcely alike in any two individuals,

so does the appearance of the optic papilla also vary in almost every individual; and I find it a difficult matter even still sometimes to decide, from inspection alone, whether the nerve under observation presents a normal appearance or not. When any doubt exists as to the condition of one or both nerves, a careful comparative examination of the second eye should be instituted, and the acuteness of vision tested with Snellen's type, and the field of vision accurately noted before pronouncing an opinion. Patients' statements as to their vision should be received with a great deal of caution, for they not unfrequently give a false report either intentionally or unintentionally; patients are frequently themselves in ignorance of their exact amount of sight, or even of the visual defect in one eye. Thus I have occasionally demonstrated to persons that they were partially or wholly blind of an eye, when they asserted or believed the contrary. It is well in all cases to keep a written record of the visible appearance and the amount of vision, as well for scientific as for practical purposes. Such accurate tests, and the notes thereof, from day to day, are not only of practical and scientific importance, but may guard against and prevent misunderstandings with our patient or the patient's friends.

*Anemia.*—The intra-ocular end of the optic nerve, denominated optic papilla or optic disc, is found sometimes anemic, of a very pale, blanched, or white colour, but quite transparent, and its large vessels perfect; this condition depends on a general anemic condition of the body. *Embolus* of the central artery may also produce this condition. I lately saw a gentleman in whom, I believe, this obstruction of the central artery had occurred, producing total blindness in a few minutes; the second eye having been lost and collapsed from injury many years previously; the optic disc was of a very pale, bluish tint, the arteries had altogether disappeared, and there remained only two or three fine thread-like veins, which seemed to vary in calibre every now and then; the surrounding fundus was healthy, with the exception of a couple of scarcely visible white specks about the position of the yellow spot.

*Hyperemia*, or congestion of the papilla, is of much more frequent occurrence than anemia; it is often temporary, sometimes enduring; the optic disc is partially or wholly of a pink or reddish colour, and a stippled appearance, with the centre of the papilla bright and normal; if the parts be highly magnified with a 4″ convex, the pink stippling will be seen to consist of capillaries; the white central spot is either a physiological excavation or the ordinary

healthy nerve; the central vessels in hyperemia are rather enlarged; the nerve may also be somewhat hazy, and its outline dimmed, or the entire papilla may be even slightly swollen. The appearance of the optic papilla, with healthy and perfect nervous function, corresponds often with that of hyperemia. We should therefore, in all such cases, be careful to examine into the subjective phenomena; congestion of the papilla may be confounded with asthenopia, hypermetropia, or astigmatism; a careful examination of the refractive condition should therefore also be instituted. I frequently find redness of the papilla to ensue after the application of atropine, and this is another reason why I make it a rule first to examine the fundus before dilating the pupil.

*Neuritis.*—Inflammation of the optic nerve is not often seen in its earliest stage, as the affected person neglects applying for advice until the disease has made considerable progress, and its symptoms become inconveniently established. Congestion of the papilla gradually merges into inflammation, and to distinguish one from the other and pronounce where one ceases and the other begins is no easy matter. In practice we find an acute, subacute, and chronic form. Acute neuritis is so well marked and its appearances so decided, that it cannot be well overlooked or mistaken, and when once seen is not easily forgotten. The papilla loses its transparency; is of a general red colour, which varies in intensity from a slight red to a deep dark red, contrasting by its dulness with the bright red of the normal fundus; it is swollen, œdematous, and projecting beyond the plane of the retina, as may be seen with the binocular ophthalmoscope, or by the curved course of the vessels in their descent from the elevated papilla into the lower lying level of the retina; it is dull, hazy, or opaque, from vascularity and serous infiltration; its outline is irregular, ill-defined, hazy, or altogether obliterated, and it becomes impossible to determine where the nerve ends and the retina commences: its position can only be determined by the relations of the large vessels, and its being the point of their convergence; its size appears sometimes abnormally large. The central vessels are partially or wholly obscured by the infiltration; generally the arteries are very thin, or even obliterated, while the veins are large, gorged, tortuous, and concealed here and there by the exudation. The nerve in neuro-retinitis from Bright's disease, presents generally a striated appearance, greyish or white-coloured streaks radiating irregularly outwards through the red surface towards the retina, with here and there small spots or lines

of hemorrhage free in the disc, or along the course of its vessels; the nerve outline wholly disappeared, and the disc appearing abnormally large, and the retina involved in the morbid process. The papilla may be uniformly dark red, swollen, and its vessels indistinct or interrupted, and the retina quite free from disease; we see this state in cerebral disease. Dr. Lyons lately showed me a patient under his care with undoubted cerebral disease, where both optic nerves were uniformly and intensely red, enormously swollen, and infiltrated; the lower part of each papilla appeared more prominent than the upper part, and the vessels underwent a considerable bend in their passage from the projecting papilla into the retina; the demarcation between the swollen and opaque papilla and the retina was very well defined and manifest in this case, as the patient was blonde, and the choroidal pigment scanty; and the light, yellowish colour of the choroidal vessels and stroma contrasted markedly with the overhanging dark red papilla. Occasionally one side of one or of both optic papillæ is hazy, with indistinct margin, and presenting all the appearances of slight inflammation. A variety of neuritis is described by some authors as *perineuritis*, in which the swelling, infiltration, and redness are confined to the peripheral parts of the nerve, while the central portions remain comparatively normal. There is a subacute form of neuritis constantly met with during the progress of cerebral disease; the papilla is of a reddish grey, slightly swollen, and having what Dr. Hughlings Jackson describes as a "woolly" appearance.

Neuritis may occur acutely and rapidly without any warning, and may cause blindness in a very few days, or there may be premonitory symptoms; generally it arises slowly, is chronic and insidious, and the impairment of vision is so slight and so gradual that we are not consulted till long after the establishment of the disease and considerable alterations have taken place; neuritis may also be periodic, each attack resulting in a further diminution of vision. Neuritis may exist and cause even blindness without any direct symptom or ophthalmoscopic evidence, when the inflammation and changes are confined to the extra-ocular portion of the nerve; sooner or later, however, such an inflammation will either extend to and manifest itself in the intra-ocular end or cause its atrophy; neuritis may also exist, but be invisible in consequence of opaque media. One eye is generally first affected, and the second one becomes attacked a short time afterwards; there is often a very slight difference in the amount of vision of the two eyes.

When both eyes are simultaneously affected the cause is nearly invariably cerebral.

There is no one symptom or group of symptoms characteristic of neuritis in particular. I know of no constant symptom in this malady beyond the loss of vision, and this, as well as other symptoms, are common to many and variable disorders. The loss of vision may be rapid, or slow and progressive; there is often a gradual narrowing of the field of vision from the periphery inwards, until finally total blindness ensues; pain, intolerance of light, coloured and luminous spectra may be present or absent; there may be dark arborescent figures, flashes of light, balls of fire, or hideous objects, and all these present themselves to the patient by day or night, frequently the latter, whether the eyes be open or shut. I attended one person affected with chronic neuritis, which terminated in complete blindness, who described to me how tormented he was with flashes of light, showers of snow, globes of fire, and at other times with dark, black objects, or even human faces, before him. The only reliable evidences of the existence of neuritis are those yielded by the ophthalmoscope. Neuritis of the optic nerve being so constantly a mere extension of inflammatory processes within the cranium, symptoms of cerebral lesion are also constantly present; there is pain in the head, diffused or localized, more or less violent, persistent or temporary, and periodic; sickness of stomach and vomiting, giddiness or even loss of consciousness, buzzing in the ears, incapacity for mental exertion, loss of memory, difficulty or loss of speech, strabismus on one or both sides, double vision, owing to paralysis of third or sixth nerves, and want of co-ordination, dilatation of pupils, or hemiplegia. Some writers have sought, from the ophthalmoscopic appearance of the nerve and fundus, to pronounce upon the exact seat and the nature of the cerebral disturbance; and notably Professor Bouchut, of Paris, who has written a very elaborate work on the subject: *Du Diagnostic des Maladies du Système Nerveux par l'Ophthalmoscope*, appended to which is an atlas containing twenty-four bad and unreal chromolithographs, representing the fundus in "tubercular meningitis, rheumatic meningitis, hydrocephalus, partial chronic encephalitis, idiotcy, cerebral hemorrhage," &c., &c. It is, I believe, impossible, in our present state of knowledge, to fix or localize the cerebral lesion from the appearance of the fundus; it is impossible, in many instances of cerebral disease, to determine its seat and nature, even taking every symptom, objective and

subjective, into account; neuritis or atrophy of the nerve with blindness, co-existing with other symptoms of cerebral disease, will render us certainly very valuable assistance as a link in the chain of evidence, and the ophthalmoscope should be employed in all cases of suspected or confirmed intra-cranial disturbance. Disease of the optic nerve and amaurosis may result from disease of any part of the brain; it does not follow, however, that disease of the brain must cause amaurosis. Extensive disease of the brain may exist in one individual without causing any serious disturbance for a considerable period, which, in another person, may cause amaurosis and other symptoms; the tolerance of the brain in some individuals to extensive disease was well exemplified by a case of disease of the temporal bone and the brain, brought forward by Dr. Eustace at the Pathological Society in 1866–67. Amaurosis due to cerebral disease may exist without any ophthalmoscopic evidence. I saw a young patient some years ago who was perfectly blind of one eye, and in whom various paralyses became established some six months subsequently; partial loss of motor power, loss of smell, and of sensation in one side. This person recovered eventually, and regained perfect vision. At no time during the illness was there any deviation from the normal in the optic papilla. Double amaurosis occurs as a rule in consequence of disease of the central nervous system; optic neuritis has been found by Dr. Hughlings Jackson more frequently with hemiplegia of the left than of the right side. Dr. Jackson remarks in his philosophical and practical "Observations on Defects of Sight in Disease of the Nervous System," published in the *Ophthalmic Hospital Reports*:—"In all cases of neuritis in which I have made a *post-mortem* examination, there always have been found notable organic disease of the head. But, as I have repeatedly said, from this symptom, with or without headache and vomiting, we cannot, during life, predict where the intra-cranial disease is, nor what it is. If, however, there is hemiplegia besides, or, as I think, unilateral epileptiform convulsions, we have strong evidence that the amaurosis depends on disease of the hemisphere. The hemiplegia may precede or follow the amaurosis; it may be passing or permanent, but in all the cases in which it had been in any way present during life, I have found disease of the hemisphere *post-mortem*." In a note he adds, he has seen a tumour pressing on the crus cerebelli, causing paralysis on the same side as the lesion, and amaurosis, but that in such cases paralysis of one or more of the cranial nerves arises, which shows

the disease to be at the base of the brain. Anything which gives rise to congestion or inflammation of the brain or of its coverings may also cause neuritic congestion or inflammation. Typhus fever, the exanthemata, mental emotions, injuries of the head, intra-cranial tumours, disease of the meninges or of the brain itself, or of the spinal chord, suppression of the catamenia, cardiac or aneurismal diseases, local apoplexy, Bright's disease, tumours of the orbit pressing on the nerve, or causing exophthalmus, intra-ocular tumours, cellulitis of the orbit, pyemia, disease of the retina and choroid, or panophthalmitis, may all cause neuritis. Towards the end of last winter I saw a young girl with considerable redness and vascularity of the optic papilla, the inside of the discs being infiltrated, very hazy and indefinable; the veins were large and gorged, and the vessels presented an interrupted appearance. I attributed this state of affairs to intra-cranial causes, and the physician under whose care she was informed me subsequently that she had had very many falls on the ice during the severe weather, and that her head frequently came in violent contact with the ice. Vision in the left eye was confined to the perception of large objects. With this eye, which presented the greatest amount of disease, Snellen's largest type could not be read, and with the right eye No. 40 only at 14 feet. I have been lately informed that this girl recovered perfectly, at which I am much astonished, for the usual termination of so much disease is at least partial atrophy and blindness. Another cause of impaired vision and chronic neuritis consists in the immoderate use of alcohol or tobacco; there is a recognized form of blindness known as "tobacco amaurosis," which Mackenzie was chiefly instrumental in establishing and bringing under the notice of the profession. When occasionally visiting the eye infirmary in Glasgow, some years ago, I was very much surprised at the frequency of this term and the large number of cases denominated tobacco blindness at the clinique of that institution. I have no doubt of the occurrence of this blindness, but I have doubts as to its great frequency; it is singular that amongst the thousands, or I may say millions, of smokers, blindness can be so comparatively seldom attributed to the poisonous influence of tobacco. Patients labouring under this malady are scarcely ever seen until the disease has passed through various stages; in a very few instances, which I believed to have been the early stage of tobacco amaurosis, the nerve presented a very slightly swollen pink appearance and partial whitish opacity. I not unfrequently see alcoholic amaurosis

in which there is decided congestion and even infiltration of the papilla; it presents a dimmed soft swollen appearance, the vessels large but not as distinct as they should be, the outline of the disc not sharply defined, and the whole fundus congested. This is sometimes, I think, primarily due to choroiditis. The affected person complains of dimness of vision as if a mist or veil was before the eyes. They see best in strong light, but at no distance can they see well. Such persons may recover their sight under suitable treatment and total abstinence. I have occasionally seen neuritis and amaurosis in children co-existent with or subsequent to cerebral lesion.

Neuritis when engaging the whole nerve is nearly always fatal to vision, and partial or complete blindness results; it may sometimes remain stationary for a time, and then progress, or vision may even improve slightly temporarily, but it will get worse again or disappear. In rare instances it ends favourably, and vision is restored. As a rule, however, the tumefaction subsides, the redness disappears, and the nerve undergoes disorganization and becomes atrophied.

*Atrophy of the Optic Nerve* presents itself to us under different aspects, according to its origin and degree. In well marked examples of this malady, the optic papilla presents a white glistening, tendinous appearance, which cannot easily be overlooked or mistaken, for it contrasts so vividly, by its dense whiteness, with the surrounding bright red field, that it forms a very prominent and conspicuous feature in the image; it appears as a flat white disc set in a red field. The capillaries and small vessels have totally disappeared, and the central vessels are very few and attenuated thread-like lines, the arteries may be visible, but empty, or may have completely vanished, and the veins be very thin, or, in rare cases, also have disappeared. The lamina cribosa becomes frequently invisible from opacity of the nerve surface. The boundaries of the optic papilla may be very sharply defined, and its shape perfectly circular, or it may be oval according to whatever anatomical shape which may have existed prior to the invasion of the disease; the disc is seen sometimes surrounded by a large circular white zone, which is due to the sclerotic, the choroid being atrophied all round; this is, however, only a coincident feature; the outline of the disc may also be irregular and appear to encroach on the retina. The colour of the nerve varies; in cerebral amaurosis it is generally of a dense white and sometimes even of a metallic lustre; in other cases the nerve is of a bluish grey or

a greenish blue tint. In the commencement or in slight degrees of atrophy it may be easily overlooked; the disc is pale, wanting in transparency, its vessels diminished in calibre, one portion of the nerve may present an atrophied condition, while another may be of a natural delicate pink colour, or be congested and vascular. The papilla, when atrophied, is frequently also excavated, but this excavation differs materially from, and presents quite different characters to those seen in glaucomatic excavation; the depression due to atrophy does not extend beyond the plane of the choroid, and the lamina cribrosa is not displaced; the depression is very superficial, and does not present the steep walls and sharp rectangular margins of the glaucomatic excavation, nor the temporary disappearance of the vessels as they descend into the cup; neither is there pulsation, either spontaneous or arising on slight pressure, as in glaucoma.

Atrophy of the optic nerve is frequently a chronic progressive disease, advancing slowly, and causing gradual loss of vision, without any pain or other appreciable symptom; and the patient does not seek special advice until an advanced period of the disease. It is sometimes very difficult to decide whether the appearances of the nerves are those of atrophy in its early or mild stage, or whether the nerve is really normal; in such a case we must make a careful examination of the entire fundus, of the state of refraction, and of the second eye, if it be unaffected; and thus by elimination and differential diagnosis we may arrive at a just conclusion; where congestion or inflammation of the nerve has been seen to precede the supposed alteration of the nerve, and the impairment of vision, there can be little doubt as to the existence of the atrophy, but in such cases the disease manifests itself very plainly to our view.

The symptoms of atrophy of the optic nerve are of the most variable and diverse, and include the majority of those usually mentioned in works under the heading "Amaurosis;" the invariable and constant one is impaired vision, diminution of the field of vision, and of the acuteness of vision.

The best diagnostic symptom of disease of the optic nerve is impairment of the central acuteness of vision and gradual concentric narrowing or limitation of the field of vision. The anterior or peripheral portion of the retina is normally the least functionally active part of the sensitive apparatus, which is readily comprehended, if we bear in mind that the retina, at its periphery, has become thinned, and that its nervous elements have become scanty or have altogether disappeared at the ora serrata itself. The retina consists simply of

cellular tissue. Any interference with the optic nerve acts at once also on the least highly endowed portion of the retina, and renders it functionless; hence the peripheral portions of the visual field suffer first and become obscured; as the optic nerve disease advances the more highly endowed and sensitive parts of the retina also become deprived of their nervous energy, and corresponding obscurations advance in the visual field, until it is finally reduced to a small limited space, or obliterated; the remaining small field may be circular, and correspond to that part of the retina in which is normally situated the seat of distinct vision, or the field may be slit-like, and correspond to the expansion of the optic nerve fibres, between the nerve and the yellow spot; the obscuration may not be concentric, but may be irregular, or the field of vision may be obscured in spots. At the same time that this concentric obscuration occurs the central acuteness of vision also becomes impaired, and the patient is unable to read anything but the largest type, and even that indistinctly.

Atrophy of the optic papilla may result from all the causes mentioned above, as causes of congestion or actual inflammation of the optic nerve; it may also occur without any inflammation of the nerve. Tobacco causes frequently disturbances in the circulating system, brought about by nervous agency. I believe the tobacco acts poisonously on the sympathetic nerve and brain, and even causes functional paralysis, and the optic nerves suffer secondarily or participate primarily in the process, and become afterwards atrophic; the papilla is not extensively atrophied, nor does it present the dense white of cerebral amaurosis, and vision never entirely disappears. One of the chief arguments in favour of the existence of tobacco amaurosis is the fact, that vision improves on the discontinuance of the use of tobacco. The immoderate use of tobacco and intemperance are very frequently found in the same individual; impaired vision is more generally attributable to alcoholism; I often see it in persons who do not make use of tobacco at all; but where the two go hand in hand, and are used in poisonous excess, it is difficult to draw the line of distinction between them. In the alcoholic atrophy I think the nerve is of an indistinct bluish grey colour, and somewhat opaque; the outlines of the disc are indistinct; the arteries appear sometimes perfectly empty and transparent along their centres, or as whitish reflecting lines with dark outlines; the veins are large and tortuous, and they also may appear partially empty; the affected person complains of a mist before him, his visual field is limited, and he cannot see distinctly at any distance.

Atrophy of the corresponding sides, or of different sides of the optic nerve, as well as similar paralysis of the sides of the retina, have been observed in hemiopia; atrophy of the nerves has also been found in ataxie locomotrice. I was consulted two years ago by a young man, about his sight; he presented very partial and ill-defined atrophy of both optic nerves, and complained of various disturbances of vision, such as occasional double or confused vision, or disappearance of objects; some months subsequently this man had pretty well marked ataxie, and I had him under observation and treatment for some months, but lost sight of him until a few weeks ago, when I observed him in the street, walking with a peculiar shuffling running gait. A frequent cause of atrophy of the optic nerve is said to be atheromatous degeneration of the vessels at the base of the brain, and of the brain itself; it is, according to Galezowski, who has written an excellent essay on *Les Altérations de nerf optique et les maladies cérébrales d'ont elles dependent*, the most frequent cause; choroidal disease, and the frequently concomitant staphyloma posticum, retinitis, neuro-retinitis, hemorrhages, glaucoma, cysts, and tumours in the nerve, and obscure changes in the nerve, such as fatty degeneration, all cause atrophy of the optic papilla.

The principal pathological alterations which occur in the atrophied optic nerve, consist in destruction of the nervous elements, and the formation of cellular tissue. The papilla is flattened, and its transparent nervous portion replaced by dense cellular tissue. The whole nerve is found flattened; its sheath dilated, or sacculated, and but loosely attached to the nerve, owing to shrivelling of the nerve itself; the interspace between the sheath and the remains of the nerve is filled with serous exudation, and a loose reticulated network of delicate connective tissue; the bundles of nerve fibres become shrivelled, of a dirty yellowish tinge, and widely separated in consequence of the increased thickness of their enclosing neurilemma; the newly formed cellular structure, or the hypertrophied remains of the original tissue may undergo degeneration, and contain fat globules and cholesterine. The small vessels and capillaries completely disappear, and the central vessels may also disappear, or be converted into dense tendinous strings, with atheromatous or pigmental degeneration of their walls; occasionally the vessels are represented by lines of chalk-like substance; sometimes they are permeable, or they may be closed and filled with disorganized blood, or with a hyaline, granular substance. One of the most beautiful

works on microscopical pathology with which I am acquainted, Professor Wedl's *Atlas der pathologischen Histologie des Auges*, published with the co-operation of Stellwag von Carion, contains several figures illustrative of atrophy of the optic nerve. In one instance the sheath of the optic nerve was found adherent to the neurilemma of the nerve fibres, and the latter displaced; in another, the interspace was filled with a trabeculated structure, the interstices of which were occupied by a thin gelatinous mass—embryonic cellular tissue. On rare occasions the nerve has been found ossified.

*Apoplexy* of the disc itself, will lead to atrophic degeneration. I have seen a case where the upper half of the optic disc was occupied by a recent hemorrhage, of a dark-red colour and irregular outline, the lower part of the disc was pretty normal, and part of the retina was clouded. The patient could see the upper part of objects before him, but not the middle or lower portions.

Tumours of a benign or malignant character originate occasionally in the optic nerve, but unless situated in the visible portion of the nerve they cannot be ophthalmoscopically diagnosed. Some cases are on record of tumours springing from the intra-ocular end of the optic nerve; and, in a very few instances, tumours in this situation have been recognized by means of the ophthalmoscope. In a case recorded and figured by Jacobson, in Vol. x. of the *Archiv für Ophthalmologie*, the papilla was very irregular in its outline, and projected unequally into the vitreous tumour, with white reflecting striæ on its surface; one portion of the papilla presented a yellowish brown atrophic condition, another part was slightly swollen and vascular, and a third projected more than the others beyond the plane of the retina, was of an intense light blue colour, and devoid of vessels; the vessels were partly attenuated, or presented here and there bright white outlines, and disappeared suddenly; part of the disc was surrounded by a dense mass of pigment; on enucleating the eye the diagnosis was confirmed and a tumour found occupying the optic papilla; several similar ones were removed from the orbit; they were all composed of a mixed form of tissue, the cellular structure sclerosed, and at the part of the ocular tumour, which appeared brown coloured, there was a bony plate in connexion with the choroid; the tumour was denominated myxosarcoma.

*Aneurism* of the central artery of the retina occurs within the optic nerve very exceptionally, but it is doubtful whether it can be diagnosed. Sir William Wilde possesses, in his very extensive and magnificent collection of illustrations of ophthalmic diseases,

the drawing of a case in which aneurism of the central artery existed.

There are various other diseased conditions in which the optic nerve becomes implicated, but as they are not recognizable by means of the ophthalmoscope, they do not come within the scope of the present paper.

Glaucomatic excavation of the optic papilla forms in itself so large and important a subject, that I must reserve its discussion for a separate communication.

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Art. XIII.—*On Renal Diphtheria.* By Ewing Whittle, M.D., M.R.I.A.; Senior Honorary Surgeon to the Liverpool Dispensaries, and Lecturer on Medical Jurisprudence to the Liverpool Royal Infirmary School of Medicine.

I apply the term of renal diphtheria to that form of diphtheritic fever in which the characteristic exudation on the tonsils is either absent, or, if present, only observed in a very slight degree, and in which the most striking feature is derangement of the functions of the kidneys. It is well known that in the latter stages of diphtheria we frequently meet with a diseased condition of the kidneys, with a copious elimination of albumen in the urine, occasioning anasarca of the cellular tissue, and a condition generally very similar to that of dropsy after scarlatina.

In the case of which I now proceed to detail the particulars, the renal affection was a marked feature from the commencement, but presenting this remarkable peculiarity, that there was no albumen in the urine, the renal symptoms being rather those of diabetes insipidus.

Jan. 23, 1866.—Eliza S., aged eleven, had been feeling ill for a day or two, and having taken much worse towards night, I was sent for. I saw her about 10 p.m. She was then in a high fever, the skin very hot, face flushed, the pulse 140 and sharp; there was delirium and great excitement. There was no fulness about the neck, and nothing to be seen on the tonsils, neither could any eruption be detected on the skin. My first impression was that it would prove to be a case of scarlatina.

I ordered a dose of calomel and James's powder, a diaphoretic

mixture, a cold application to the temples, and a sinapism to the nape of the neck.

24th.—She was more calm, but scarcely knew any body; fever not quite so high; no eruption on the skin; nothing apparently wrong with the throat.

25th.—Much improved; now quite rational; pulse down to 112. She is very low and prostrate; the tonsils look a little reddish. On the day before I had begun to regard the case as one of masked diphtheria. I arrived at this conclusion, *par voie d'exclusion.* If scarlatina had set in with such violence the characteristic eruption would have appeared by this time, or the patient would have succumbed to the poison, which must have fully pervaded the system to have produced such severe symptoms in its access. No inflammatory affection of the brain or its membranes would have set in so rapidly and so soon declined in severity. These considerations led me to the conclusion which I expressed confidently to the parents, that the disease was essentially diphtheria, and this diagnosis was very soon strikingly confirmed.

This day I ordered her small doses of carbonate of ammonia and a little wine.

26th.—To-day she appeared quite convalescent. But two sisters, one aged thirteen, the other five, were taken ill. The elder, Mary Anne, seemed affected like her sister Eliza, but not nearly so ill; her throat was red, congested, and showed a few small diphtheritic patches. Emily's was a case of well-marked diphtheria; the throat very much affected internally, and the glands in the neck very much swollen and very tender. She was dangerously ill for about ten days, but in her case there was no renal complication.

27th.—On this day the parents were both ill with diphtheritic sore throats and a considerable degree of fever, which lasted for several days, but they were not confined to bed.

To return to Eliza. She kept very low and had no appetite, but was now quite free from fever. On examination the urine was found to be alkaline, sp. gr. 1008, but contained no albumen. Quinine, with hydrochloric acid, prescribed. She continued to improve for several days, though the urine was still alkaline.

Feb. 1st.—She got up; appearing to her parents much better, she was now allowed to make too free; the result was that in a few days she was taken very ill again.

Feb. 4th.—This day she was not able to get up; had no

appetite whatever; her skin was very hot and dry, and she complained of intense pain in the head. The urine had a more decided alkaline reaction; very low; sp. gr. 1002, but there was no albumen. It was now observed that she passed urine in large quantities, and she would scarcely drink anything but water. Dover's powder, with acid mixture, prescribed.

5th.—To-day she was better, and more free from fever, but throughout the remainder of the month there was little or no improvement. She would take hardly any food; she drank a great deal of water, and would take very little wine. She could be got to take very little medicine. She passed daily from five to seven pints of water, nearly colourless, varying in sp. gr. from 1002 to 1003; reaction always alkaline, never containing any albumen. She was subject almost every day to violent paroxysms of headache, which, after lasting several hours, became relieved spontaneously by a copious discharge of urine; as quinine seemed to afford no relief, it was discontinued, and small doses of muriated tincture of iron substituted for it. This always had a good effect when taken regularly; the headaches being much less severe, and the urine decreasing in quantity and improving in quality.

March 1st.—Urine now 1005, still alkaline; headaches less severe. From this day she took the tincture of iron more regularly, and as she did she steadily improved.

12th—The urine has a sp. gr. of 1008, and is diminished to about two quarts in quantity.

18th—It was now 1010 and neutral; her appetite was now returned, and the headaches nearly gone.

26th—The urine reached the sp. gr. of 1013, and now, for the first time, had an acid reaction, and was reduced to about the natural quantity; there were now no headaches; the appetite was pretty good; she was able to be up, and was improving both in health and spirits; in fact, seemed to be well. However, I advised the medicine to be continued for about another week. This advice was not attended to. She now looked upon herself as well, and was even allowed to go out.

April 2nd.—She was now not so well again; the headache had returned; her appetite had fallen off, and the urine was again alkaline, increased in quantity; and on this day (and on this day only) contained a trace of albumen. She was ordered an aperient, confined to bed for two or three days, and the tr. ferri., with acid. hydrochl. dil. resumed. She gradually improved, the urine

varying from 1009 to 1011, but containing no albumen, and having an alkaline reaction.

12th—On this day the sp. grav. was 1013, and the reaction acid. The improvement continued steadily from this date; at the end of a week she was quite well, the urine natural in every respect.

Throughout the whole case there never was any trace of sugar in the urine.

The sister Mary Anne, was affected in the same way as Eliza (but not in the same degree) *quoad* the renal secretion. She took the tr. ferri. steadily, and was pretty well at the end of a fortnight from her first taking ill.

I think this case worthy of being recorded as a remarkable instance of diphtheria manifesting itself purely as a nervous fever; the lesion of innervation evidenced in the early stage by high delirium and excitement, and in the chronic stage by violent headaches of a nervous character; and these paroxysms being evidently connected with functional derangement of the kidneys, seemingly due to nervous lesion, for the absence of albumen from the urine shows that at no time were the kidneys in a state of congestion; and in this case we may, I think, draw the conclusion, that the force of the poison, if the poison be really present in the blood, was expended on the nervous rather than on the circulatory system.

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## Art. XIV.—*Notes in Medicine and Surgery.* By Philip C. Smyly, M.D., F.R.C.S.I., L.C.P.I.

I. PARALYSIS FOLLOWING OR CAUSED BY BLOOD POISONINGS; COMPLETE RECOVERY. BEING A PAPER READ BEFORE THE MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS.

II. A CASE OF RUBEOLA? OR HYBRID OF MEASLES AND SCARLET FEVER. DEATH FROM SUDDEN HEMORRHAGE INTO THE BOWELS.

III. A CASE OF PURPURA, WITHOUT FEVER; DEATH FROM HEMORRHAGE INTO THE STOMACH.

There are few who have observed disease even for a few years who have not been struck from time to time by what may be termed mixed or mule cases, and also by observing that there is

a kind of alternation of certain diseases, generally classed as distinct, and yet with a degree of certainty traced to the same poison; for example, a person exposed to scarlet fever poison may take erysipelas or puerperal fever. Diphtheria may produce hospital gangrene, and hospital gangrene malignant sore throat, and so on.

The following cases, I think, illustrate this alternation in some degree. They are also interesting in other respects.

Case I.—The first case was of a child, about four years old, whose illness Dr. Smartt describes thus:—

"The child was a day or two ill when I was called in, and was then suffering from the ordinary symptoms of tracheitis; the patient was hoarse and feverish, with a constant brassy cough; after some time the inspirations became very much prolonged, with the characteristic crowing noise of croup. As time advanced the fever increased, and the child became exceedingly restless, irritable, and drowsy; the breathing was now gasping, and the skin got quite cold and covered with clammy sweat." The child then died.

Case II.—The father of the child attended him night and day through his illness. On the 12th of September he went to a press to get something for his child, and on putting in his hand a mouse seized the soft part of his thumb with such force that it could not extricate itself; he had to tear it away with his other hand.

The child was so ill that no attention was paid to the injury for some days, though it gave him great pain. On the 15th the thumb had swelled, and a poultice was applied; and on the 20th a deep seated whitlow was opened. The arm was so swelled that leeches were applied; an abscess formed at the elbow, which was opened on the 29th. Dr. Smartt says:—"The inflammation extended up the arm to the lymphatics in the axilla, and several abscesses formed on the hand and arm, which were opened from time to time, and free incisions had occasionally to be made on the arm." When he arrived in Dublin he was very much prostrated, and had completely lost his sleep. The bone of the first phalanx of the thumb was exposed, and there were extensive and deep sloughs both on the arm, and fore-arm, and hand. The large linseed poultices were changed for the perpetual bath, to which was added tincture of belladonna, and a rather high temperature maintained. I may state that the reason for abandoning the

poultices was that changing them produced fainting, and the discharge was so great and so offensive that they had to be changed twice a day.

On the 12th of November the arm was nearly quite well; he was able to walk about, and was getting strong in every way. He then began to complain of what he called a wall across him, beyond which nothing would pass. He got obstinate constipation, and at the same time his limbs began to fail; his sight also became dim, and he complained of want of energy and ability to exert his mind.

On the 23rd of November he went to the country, able to stand and walk with assistance. He soon lost all power in his legs and then in his arms, and on the 5th of December he was quite helpless. On the 8th he began $\frac{1}{4}$ grain doses of ext. nux vomica three times a day.

On the 20th December he returned to Dublin, and Dr. Stokes saw him with me. He was then quite unable to move in bed; both legs were insensible to touch; the right arm was quite powerless, and the left could be moved slightly with considerable exertion. He was unable to feed himself. Dr. Stokes advised the nux vomica to be continued, and recommended galvanism.

On Christmas-day I applied the galvanism for the first time. I used one of the electro-magnetic machines. One conductor was attached to the foot, the other placed in the hand of the same side; but though I pulled out the button to its full extent no muscular contraction could be produced. Thinking that the machine was out of order I took the conductors in my own hands, and the contraction was so violent that my arms were sore for several days after. The galvanism was applied every day for several hours by his attendant, with marked improvement in sensibility, until the 20th of January, when he was able to use both arms and legs. On the 6th of February he was able to walk alone, and went to the South of Ireland; and he is now quite well and able to walk and ride without fatigue.

Case III.—This gentleman's mother went down to the country to attend her grandson, but arrived late, just after the child's death. She attended her son for some days, and then returned to town to prepare her house for him. Having completed her arrangements she went to the Co. Wicklow with her daughter, to leave the house for her son and his family. On the 6th of October she felt very ill and weak, and was confined to bed with a very severe attack of

eczema, from which she had been suffering slightly when she first attended her son.

On the 16th of *October* she was well enough to be lifted on the sofa; on and after the 30th she was able to walk out of doors without fatigue. On the 7th of *November* she fainted suddenly at the dinner table, and was carried up stairs. This was followed immediately by high fever, little or no sleep, and complete distaste for food. On the 19th erysipelas appeared on the face and spread over the head, and faded away in a few days.

She then complained of pain and numbness in the right arm and in the knees and feet. She then fell into a sort of swoon, which lasted for some hours; when she returned to consciousness one side of her face was fixed, and there was slight distortion to one side. This gradually subsided, and at the same time the right knee swelled as if pyemia was setting in. In a few days both legs and arms became œdematous and completely paralysed; insensible to touch, though exquisitely sensitive to changes of temperature. A cold hand applied to the surface felt like a burning coal. Urine scanty and albuminous. Extract of nux vomica and galvanism, with mild diuretics, were employed with gradual improvement. On the 20th of February she was first able to walk a few steps with assistance. She is now quite well, with the exception of slight œdema of the ankles in the evening, and slight stiffness of the right shoulder.

Case IV.—This lady was attended from the 6th to the 16th of October by her daughter (who never attended or was in contact with either of the first two cases). On the 16th she first complained of sore throat; she had very high fever; well-marked false membrane all over the uvula, soft palate, and tonsils. Dr. Darby, of Bray, treated her most successfully, and she was pronounced quite well on the 28th of October. Some days after her voice began to be again nasal, and the soft palate became completely paralysed, and continued so for about six weeks. She was treated for the paralysis with tincture of nux vomica in decoction of bark.

*To recapitulate.*—The child died in a few days of a blood poison, implicating the throat and presenting symptoms of croup.

The father received a wound while attending his child, got diffuse inflammation, recovered, and was subsequently paralysed, without having had any throat symptoms.

His mother, with slight eczema, attended him, got the eczema

frightfully aggravated, followed by erysipelas, and by symptoms of pyemia, got much better, and then became paralysed and anasarcous, and had symptoms of albuminuria, with no throat affection.

Her daughter, who only attended her, and was never in contact with either of the other patients, got a throat affection, high fever, false membrane in the pharynx, got well, and subsequently got paralysis of the soft palate.

Were these an accidental sequence of diseases, or were they different phenomena of the same blood poison, modified by the condition of the patients, or circumstances in which they were placed?

From the researches of Bretenau, Greenhow, and many others, we know that the sequelæ of diphtheria are very various.

Greenhow says paralysis is not an uncommon affection; and Roberts, Eisenman, and others, describe a form of hospital gangrene as diphtheritis. I will not take up the time of the Society with the literature of diphtheria, which is rather extensive, but I will feel that I have done a good work if these few notes be so fortunate as to elicit some of the wisdom of the heads of the profession on this very interesting and difficult subject—the nature and effects of blood poisons.

I. *Rubeola, or Hybrid of Scarlet Fever and Measles.*
II. *Purpura.*

I.—The two following cases, though not connected directly with the epidemic of malignant purpuric fever, are interesting, as they are illustrations of the apparent tendency of the epidemics of last spring to assume a hemorrhagic character:—

On the 8th of May I was called to see a child, about six years of age, who had been feverish for a day or two; the eyes a little red and watery. The measles being at the time epidemic, I concluded it was a case of measles. On the 9th I saw the child again; the fever was intense, and a bright red rash had developed itself on the legs and arms, like scarlet fever. The throat began to swell, and a slough formed on one tonsil. I called Dr. Stokes in to consult, and he agreed with me that it was a hybrid case, having most affinity to scarlet fever. I may mention that there was some intolerance of light, but no watering of the eyes after the second day. On the fourth day of the eruption in the child the housemaid became ill, and passed through a characteristic and very severe attack of measles. On the 13th the other side of the

child's throat swelled, and a whitish slough formed on it also. The mouth and pharynx were filled with thick, filthy, tenacious mucus, and the smell was very offensive. The pulse, however, was good, and he bore the wine well. The 15th he was progressing favourably, and so continued until about four in the morning of the 16th, when he called to be lifted to have his bowels moved, and complained of great pain. He passed about a pint of blood; he then lay quiet for about half an hour, when he again passed rather more than before. Turpentine and brandy and ice seemed to check the flow, but about two o'clock he passed a quantity of blood under him in bed and died.

II.—About the middle of July I was called to see a young lady who had been for some time in delicate health; she had been greatly frightened, and had also had a somewhat fatiguing attendance on an invalid. She complained of great loss of appetite, of great drowsiness; her strength had failed; she had also ugly blue and red spots round the neck and on the legs. She had had very severe attacks of hemorrhage at the monthly periods for some time. Dr. Churchill saw her with me, and by means of the ergot and tincture of larch bark the flow of blood from the vagina was completely stopped. The pulse was at first not fast, nor at any time hard or feverish. There were no symptoms of spinal or head affection whatever. Very extensive ecchymoses formed round the eyes and under the conjunctiva. Throughout the illness the patient was very unhopeful of recovery. On the morning of the 1st of August she greeted me on entering her room with "I have had such a good night, and I feel for the first time that I can get well." The pulse was good—the heart acting well, and the purpuric spots and patches all fading. The hemorrhage from the vagina and bowels had completely stopped, and in every way she was progressing most favourably. Dr. Stokes, who had seen her repeatedly during the illness, was much pleased with her condition. In the afternoon she felt great pain, and passed a large clot of blood from the vagina, and again three times in the evening. She improved again about ten o'clock, and settled herself to sleep. About one o'clock I was called to see her; she complained of intense pain in the left side, just below the false ribs, and of great sickness; she threw her arms about in great agitation; the pulse rapidly failed at the wrist, the heart became irregular, and with slight convulsions she died, evidently from hemorrhage into the stomach.

There was no *post-mortem* examination, but the appearance of the body immediately after death left no doubt on my mind that the hemorrhage was into the stomach.

Death from hemorrhage into some vital organ is not an uncommon termination to purpura. The case is interesting, occurring as it did, at the same time with the purpuric fever, and yet being a typical uncomplicated case of purpura hemorrhagica.

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ART. XV.—*Description and Statistics of the Waterford Lying-in Hospital, in Illustration of the Conditions under which the Occurrence of Puerperal Fever in such Establishments may be Lessened or Prevented.* By JOHN ELLIOTT, A.M., M.B.; M.R.C.S., Eng.; Medical Attendant to the Workhouse, Fever, and Lying-in Hospitals, Waterford.

IT is not probable that puerperal fever has of late years become more prevalent or fatal than formerly in Lying-in Hospitals. Indeed, such an undesirable and unexpected result would seem scarcely consistent with the hygienic and sanitary precautions and improvements which have been so largely and generally introduced into those Institutions; for although one may not be convinced that the outbreak of zymotic disease is always due to preventible causes, yet the general adoption of the measures above alluded to, as well as improvements in treatment, one would suppose must have limited the range and lessened the mortality of this terrible scourge. However this may be, and whether the mortality from puerperal fever be greater or less in Lying-in Hospitals than of old, it is certain that it has excited so much dissatisfaction, as to originate the inquiry whether these establishments, extensive and magnificent as they are, should not be closed; and the patients, for whom they are intended, be relieved and treated at their own homes. This dissatisfaction may, indeed, have been quickened into activity under the influence of the questioning and critical spirit which is testing all established institutions as well as all received opinions; nevertheless, the important question thus raised has already attracted considerable attention, and been the subject of keen discussion, as well within the ranks of our profession as amongst the lay public; and the interest already excited is pretty sure to increase rather than diminish, unless the circumstances under which it has originated can be altered for the

better. The alternative to which this inquiry points would also prove very injurious to various interests, and not last nor least to the interests of the patients themselves. Any modification, therefore, of Lying-in Hospitals, consistent with their maintenance as hospitals, is worthy of consideration, provided it remedy the evil which threatens their very existence.

Facts, however, rather than theories, are the desiderata for this purpose. It is, therefore, felt that the experience afforded by the working of a Lying-in Hospital, however small, which, for more than twenty-nine years, has never been closed for a single day on account of puerperal fever, and in which, during that period, 3,409 women have been received and delivered, with the loss of only five of that number by that fatal disease, is not without value as a contribution towards the consideration of this important subject. Under the influence of this feeling alone, the following description of this institution and its working is subjoined.

A Lying-in Charity for the relief of poor women at their own homes had been in existence in Waterford from the commencement of the present century. It had been got up and mainly supported by the Society of Friends; and in the year 1838, at the instance and with the aid of the same benevolent body, it was determined to supplement and extend the benefits which had been derived from the charity, by the establishment of a Lying-in Hospital, sufficient for the wants of the town, which should be supported, as the former had been, entirely by voluntary contributions, and managed, like it, by a committee of ladies.

Some preliminary difficulties having been surmounted, and the necessary funds having been collected, the hospital was opened in the month of March, 1838, at a small house rented for the purpose, in an elevated and airy part of the town.

Of this house, only two rooms were available for the occupation of the patients. One was a very small room, in which were two narrow couches or beds, on which the patients were delivered; and the second, a larger room, in which were eight beds. Into this last-mentioned apartment the patients were removed at the end of some hours after delivery, and they continued to occupy it during their stay in the hospital. This larger ward was lighted by three windows with a louvred pane in the upper sash of each. The door was removed from its hinges, so that the entrance was rendered a mere door-way, necessarily open at all times; the bedsteads were plain iron couches, very roomy, but devoid of tester, curtains, or

valance of any kind; the beds were of straw, inclosed in a sack or ticking, and changed for each patient.

Into this hospital 753 women were received and delivered between March, 1838, and October, 1844, a period of six years and six or seven months. Of these, six died, three of the deaths being the result of puerperal fever in one or other of its forms, thus giving a total mortality of 1 in 125½, being a per centage of 0·79 or 4-5ths nearly; and a mortality from puerperal fever of half the amount, viz., 1 in 251, or 0·39 per cent.

In October, 1844, the hospital was removed to the house which has been in continued occupation to the present time. This house is less favourably circumstanced as to its surroundings than was the former. It is situated in a narrow street, about 25 feet wide, in a poor and rather densely inhabited neighbourhood, and the ground on which it stands is rather low.

It consists of six rooms. On the ground floor is a board-room to the front, and behind it a kitchen; on the first floor a small apartment to the rere, in which are two delivering couches; and to the front, an apartment or ward in which are four beds for the reception of patients after delivery, and during convalescence.

On the upper or second floor are also two rooms; one to the rere occupied by the resident midwife, and another to the front, in which are four beds for the reception of patients.

Each of the wards, in which are four beds, is lighted by two windows, with a louvred pane in the upper sash of each. The door of each is removed from the hinges as in the former hospital; and the bedsteads and bedding as before. Behind this house or hospital, if it be worthy of that appellation, is a small yard, in which are a wash-house, ash-pit, privy, and house for the storage of straw, but the drainage and sewerage are by no means perfect. These details, which may appear to some tedious or trifling, are given, because a knowledge of them is necessary for a due appreciation of the results.

Into this hospital, from October, 1844, to this day, that is during a period of twenty-three years, there have been received and delivered 2,656 women. Of these nine have died, two of that number, of puerperal fever in the form of puerperal hysteritis, being a total mortality of 1 in 295⅑; or a per-centage of deaths of 0·33, and a mortality from puerperal fever of 1 in 1,328, being a very small fraction indeed.

It will have been seen that in the first hospital where two

apartments only were devoted to the immediate use of the patients, eight beds were grouped together in a single ward; and that in the present hospital three apartments are available for their use, so that the same number of beds is divided between two wards; and it will be noticed, as a significant fact, that whereas the mortality from puerperal fever was, in the first hospital, 1 in 251, during a period of six years and six months, the mortality from the same cause has been, in the present one, only 1 in 1,328, during a period of twenty-three years.

In this, as in larger hospitals, and especially in Lying-in Hospitals, the number of patients together under treatment has varied greatly; there have been occasions when all the beds were occupied at the same time; and once or twice it has been found necessary to receive even more than the proper number; generally there have been only one, two, or three in hospital at the same time, and not unfrequently the hospital has been for some days, or a week, or even longer, completely empty.

This arises as well from the system under which the patients are admitted, as from the nature of the cases. They acquire their claim on the hospital by tickets of admission, which they obtain during their pregnancy from the subscribers to the hospital, who receive one ticket of admission for each sum of 10s. which they contribute. With these the women come to the hospital when their labour commences, and they must be received.

The annual admissions have varied from 79 (the smallest number within a full hospital year) to 152. The largest number of deaths from all causes that has taken place within any one year is three; and this annual mortality has occurred twice—in the years 1842 and 1860; the other deaths took place singly in different years. There was one period of six years, in which 566 women were delivered without the loss of one of the number from any cause; and another interval of four years similarly favoured, during which 558 women were delivered. This last period included three years, in which there was a comparatively large number of deliveries—in 1862, 142; in 1863, 150; and in 1864, 152.

The first death from puerperal fever, which was indeed the first death that occurred, took place in September, 1841, the second in January, 1842, the third in August, 1843, the fourth in January, 1860, and the fifth in May, 1866. Thus it is seen that the hospital had been open more than three years before this disease proved fatal in a single instance; and that there was an interval of more

than sixteen years, from August, 1843, to January, 1860, during which 1,811 women were delivered, without a death from this cause.

I have presented the various aspects under which these statistics may be viewed, as I have given details of construction and arrangement, because mere numerical results, unless thus accompanied and guarded, have little practical value in the way of either warning or example. To complete what may be required in this way, it may be added that the town of Waterford contains about 28,000 inhabitants, a large proportion of whom are very poor; that it is not remarkable for being very healthy, and that it generally comes in for a full share of the zymotic diseases which afflict Ireland, as well puerperal as other. Indeed puerperal fever has prevailed through the town, during years, in which the hospital was nearly or altogether free from it.

After what has been said, it is probably not necessary to do more than touch on the leading reasons why an hospital so situated, not distinguished by external hygienic advantages, and ministering to the poorest of a needy population, should have been favoured during a period of nearly thirty years, and notably during the last twenty-three years, with such a general exemption from the scourge, which has marred the usefulness of other large and magnificent institutions, enjoying advantages of various kinds, in which this small hospital, if it be worthy of such a name, is deficient.

In the opinion of some, the comparatively small size of the town may have a favourable effect, because the difficulty of maintaining health, and of escaping from disease, under circumstances which favour its invasion, as in the case of parturient women, is *cæteris paribus*, increased as the population becomes massed together. But the causes, more directly influential in this instance, will, no doubt, be found:—1st, In the small size of the hospital and of its wards, or rather in the small number of patients which they receive at the same time. 2nd, In the fact, that the hospital is periodically empty. 3rd, In the delivery of the women on beds, and in an apartment other than those occupied by them during convalescence: an arrangement which becomes possible only in a small establishment with wards immediately adjacent. Lastly, In the precautions by free ventilation, and the nature of the bedsteads and bedding, to prevent or dissipate the fomites of puerperal disease.

On a review of these conditions, in order to decide how far they may be suitable for adoption elsewhere, some, such as louvred window panes, open doorways, straw beds, and uncurtained bedsteads, might not be readily submitted to among a population less hardy,

and less accustomed to privation than ours. But the principles which they exemplify, and which of course are well known and of general application, must be kept in view, and enforced with whatever modifications of details may be found inevitable, if puerperal disease is to be avoided.

It may also be thought, that however great the sanitary advantages derivable from a small or cottage hospital, such a structure is not economical, looking to the accommodation it affords; nor could the principle be carried into operation, so as to meet the more extended requirements of a large community. With reference to the first objection it may be remarked, that an inspection of the annual reports of the hospital, for the last ten years, shows that within that period 1,269 women have been delivered, at an average annual expense for each of 15s. 9d., including the cost of baby clothes. The total average annual outlay for the same years has been £98; of this sum, more than half has been absorbed by the rent of the house, £12, and by the payment of the hospital staff, which consists of a resident midwife at £25, and a servant at £13 10s., board wages, in all £50 10s.; which constitutes an unvarying outlay quite independent of the number of patients admitted. Now during the ten years in question, the annual admissions have varied from 152 to 114. If then we take the first number as a measure of the capability of the hospital, it is evident that a much larger number of women might have been admitted with a corresponding diminution of the average expense for each, as the unvarying outlay, which constitutes half that expense, would have been divisible among a larger number of inmates.

Thus during the years in which the largest numbers of women—viz., 152 and 150—were admitted, the average expense for each woman was 13s. 6d., and 11s. 6d., respectively. If then, the wants of a district required, or it were desirable for educational or other influential reasons, to bring together, or rather into close proximity, a larger, nay a much larger number of patients, this could be done with a due regard to economy, and without sacrificing the principle of segregating them into small houses and small wards; wherever such houses could be found, or built immediately adjacent to each other.

For instance, were the requirements of Waterford greater, one or more houses, precisely similar to that now occupied, might be rented immediately adjoining, at the same rent of £12 for each. These would give an additional accommodation of twelve beds each,

as the apartment used for a board-room in the present hospital, might, in each adjoining house, be occupied as a ward; one board-room being sufficient for two or three, or more adjoining hospitals. Thus two such houses would afford twenty beds, and so on in proportion. Nor would the advantages peculiar to such a mode of construction be endangered by immediate proximity; provided no interior communication were permitted between the several buildings. One resident midwife, assisted, as she probably would be, by pupils, male or female, would also be found sufficient for twenty beds, thus further diminishing the average cost of each.

Again, if a rent of £12 be taken to represent a building capital of £150 or £170, it is evident that an outlay of about £300 or £340, might be made to give accommodation for twenty patients, or indeed for more, as constructions, especially intended for hospital purposes, would certainly give more accommodation within the same space, and be more convenient than dwelling-houses converted to the same uses. Such a building, or a row of such buildings, might be rented or constructed in the poorest neighbourhoods, where they would be most needed, and where their very proximity would itself be a great advantage to those for whose use they are chiefly and primarily intended. This last consideration is also an additional inducement, especially in large cities, for dividing hospital relief of this kind, provided sufficient accommodation be grouped together in each chosen locality, to meet the wants of the neighbourhood, and to present a field sufficiently large, to afford the experience necessary for educational requirements, with the consideration due to the convenience of the medical attendants and teachers.

Subjoined is a recapitulation of the statistics already given, with the addition of some others likely to prove interesting.

PRESENTATIONS.

| | |
|---|---|
| Vertex, | 3,271 |
| Vertex with hand, | 18 |
| Face, | 11 |
| Upper extremities, | 8 |
| Lower extremities, | 88 |
| Funis, | 9 |
| Placenta, | 4 |
| Head and feet, | 1 |
| Hand and foot, | 1 |
| Not specified, | 47 |
| | 3,458 |

OPERATIONS.

| | |
|---|---|
| Embryulcia, - - - - | 15 |
| Forceps, - - - - | 17 |
| Turning, - - - - | 7 |
| | 39 |

CAUSES OF DEATH.

| | |
|---|---|
| Puerperal fever, - - - | 5 |
| Rupture of uterus, - - | 5 |
| Hemorrhage, - - - - | 1 |
| Collapse or exhaustion, - - - | 1 |
| Convulsions, - - - - | 1 |
| Spasmodic cholera, - - - | 1 |
| Chronic broncho-pneumonia, - - | 1 |
| | 15 |

With respect to the above summaries it may be stated that the forceps has probably been used more frequently than is recorded in the hospital register. The number of deaths from rupture of the uterus is comparatively large; the rupture was, however, in all the cases, spontaneous, and, in one, if not two instances, the sufferers were brought to the hospital in a dying state, having obviously sustained the lesion before admission. The greater number of these cases also occurred many years since, when the axiom that "meddlesome midwifery is bad," and the principle of trusting to nature had, perhaps, an undue influence over practice. Were similar cases met with now, the event would probably be different, at least in some of them.

BIRTHS.

| | Born Alive. | Still-born. | Total. |
|---|---|---|---|
| Males, - | 1,712 - | 95 - | 1,807 |
| Females, - | 1,593 - | 58 - | 1,651 |
| | 3,305 | 153 | |
| | 153 | | |
| Total births, | 3,458 | | |
| Women delivered, | 3,409 | | |
| Twin cases, - | 49 | | |

ART. XVI.—*Remarks on a Case, illustrative of some Points of Difference between Sycosis Parasitica and Impetigo Sycosiformis.* By T. W. BELCHER, M.D.Dubl., F.K. & Q.C.P.I.; Physician to the Dublin Dispensary for Diseases of the Skin; &c.

SEVERAL months ago, during the severe weather which was felt so much in Dublin, a gentleman consulted me, on the recommendation of his ordinary physician, about a disagreeable looking eruption on his face. The disease was limited to the parts habitually shaven every day by those who do not wear their beards. It covered the chin, the upper lip, and part of each cheek; but did not extend under the chin, or in any other direction. At the time of his first visit to me, he stated that he had had this eruption before; that it commenced with an affection of a small part of the skin only; and that thence it had extended until it reached the condition in which I saw it. This condition was as follows:—Around the roots of the hairs were plainly to be seen small conical pustules. These were particularly observed round the roots of the mutilated or stunted hairs of three or four days growth, which had started into existence by reason of his having been obliged to dispense with the use of the razor. The skin presented a dark red appearance, partly, I was informed, the remains of a former attack; and there was much inflammation of the subcutaneous structures, as evidenced by heat, tense swelling, and smarting pain. The patient's general health was good; he lived a few miles from town, spent several hours daily in a town office, to and from which it was his custom to walk, when the weather permitted him to do so. His habits were temperate; and he attributed the attack to the irritation caused by shaving, and to cold.

He was advised to use an anodyne lotion consisting of equal parts of spirit of chloroform and glycerine; and to take forty minims of Neligan's ioduretted solution of iodide of potassium and arsenic[a] thrice daily on a full stomach.

At his next visit, five days afterwards, the inflammatory symptoms had considerably subsided, but yet the eruption remained as before, plus some brownish-grey scabs and crusts. Hebra's solution or tincture, to which I have frequently referred in former papers in this Journal, was now directed to be applied, and cleaned off by

[a] Diseases of the Skin, Second Edition, 1866, p. 269.

poulticing. Four days later, Neligan's solution having been all along continued, the disease had not improved as I should have wished, so I advised the use of an ointment containing calomel, cold cream, and chloroform (30 grains, 1 ounce, and 20 minims, respectively); also a subacetate of lead lotion (1 dram of liquor plumbi to 12 ounces of rose-water). He was directed to wash the surface with equal parts of new milk and the lead lotion; and when poulticing, to saturate the poultice with lead lotion; also to continue the internal medicine as before. I saw him again in a week. He was now very much better in every way; the remedies last mentioned were advised to be continued; and in two days after, when he last consulted me, I made the following note:—"In this case there was considerable swelling of the tissues, and induration round the pustules; from each of which grew a thick bent hair." I may add that I have since seen this gentleman looking quite well, save that a slightly red stain remains on those parts of the skin on which the disease had been situated.

The *diagnosis* of this case is the point to which I wish particularly to direct attention. It was manifestly either one of Sycosis, or Impetigo Sycosiformis. The former is by most modern dermatologists considered a parasitic disease; while the latter is a variety of impetigo closely resembling sycosis. According to others, again, the two are identical; while, according to Dr. M'Call Anderson, the variety of impetigo just referred to is nothing more than the affection termed by him, in his work on Eczema, *Eczema Pilare Faciei.*

Nothwithstanding the incontestable fact, in the opinion of some, that a parasite does exist, and can be seen in Sycosis, and that its presence is the essence and cause of the disease, others are found who deny its invariable presence in, and therefore its necessary connexion with Sycosis; while there is weighty authority to favour the opinion that the alleged vegetable fungi are entirely a myth.

Dr. Neligan's opinion I give in his own words, from the second edition of his treatise on *Diseases of the Skin*, p. 417:—"As regards the appearance of the eruption, in one of its stages it certainly bears much resemblance to acne, in being more or less pustular, but the pustules which are present are, in my opinion, the result of irritative inflammation caused by the existence of a parasitic vegetable production, first described by Gruby, and since the publication of of his observations in 1842, by others also. As the result of repeated microscopic examination I fully coincide with M. Gruby

and Dr. Hughes Bennett as to the existence of this parasitic cryptogamic plant in Sycosis." Of this parasite—the microsporon mentagrophytes, Dr. Neligan gives the following account from M. Gruby (p. 419):—"On examining the crusts or scabs under the microscope they are seen to be composed of epidermic cells; but a microscopic examination of the hair demonstrates that the entire of that part of it which is inserted in the skin is surrounded by cryptogamic plants, which form a layer between the sheath of the hair and the hair itself, so that the hair is placed, as it were, in a cryptogamic sheath, just as a finger in a glove. But it is a remarkable fact that the parasitic growths never extend above the surface of the cutaneous epidermis; they have their origin in the matrix of the hair, and in the cellules of which its sheath is composed, and they increase so as to envelope the portion of the hair inserted in the skin. The *sporules* are almost innumerable in every part of this sheath, and are firmly adherent both to it and to the hair itself, so that it is difficult to separate them without tearing the sheath."

Mr. Erasmus Wilson, whose opinion is entitled to the greatest weight, describes Gruby's discoveries above noted, and thus writes:—"Gustav Simon adds his testimony to that of Gruby, in favour of the vegetable pathology of sycosis. For my own part I have failed to discover these vegetable fungi, and, for several reasons, entirely disbelieve in their existence."—(*Diseases of the Skin*, Fifth Edition, p. 714).

M. Bazin looks on this affection as a variety of ring-worm; and with him agrees the eminent French writer, M. Hardy, who calls it "trichophytie sycosique," looks on the parasite as "un trichophyton altéré;" and thus lays down the principles of diagnosis between sycosis and impetigo:—"Dans le sycosis les tubercles sont isolés et s'accompagnent de gonflement sous-cutané, au dessous des croûtes on trouve des ulcérations, quelquefois même des fongosités, et les poils faciles à extraire presentent au microscope des altérations caractéristiques; dans l'impetigo, au contraire, les croûtes sont large, étendues, sans gonflement sous-cutané persistant, les poils sont adhérents et ne présentent au microscope aucune altération."—(*Leçons sur les Maladies de la Peau.* Paris, 1863. Edit. II.)

M. Hardy is of opinion that its single efficient cause is contagion, and that it is frequently transmitted by the use of the razor.

The opinion of that eminent dermatologist, Professor Hebra, of Vienna, does not coincide with that of Hardy. Mr. Nayler, of

London, noticed this fact in connexion with his own view, and wrote as follows:—"My own observation of the disease, in so far as it relates to microscopical inquiry, has led me to the belief that, in this country at least, sycosis is seldom attended by a parasite; and I quite share the opinion of Hebra, that the presence of a fungus should be considered accidental, and not an essential condition of the complaint."—(Nayler, *Diseases of the Skin*, Lond., 1866, p. 194).

That the absence of the fungus is not conclusive against the existence of parasitic disease in sycosis is maintained by Dr. T. Fox, who says:—"It is probable that the fungus, which is the cause of the primary irritation, is more or less destroyed by the pus which forms in the follicle, the tissues, nevertheless, continuing inflamed, in consequence of the peculiar structure of the part."—(*Skin Diseases*, p. 258).

Within the last few days, Dr. M'Call Anderson, has published a second edition of his, in my opinion, very excellent monograph on Eczema. Premising, that he holds impetigo to be merely a pustular variety of eczema, I may mention that he gives a table of differences between sycosis, and what he terms eczema pilare faciei (the impetigo sycosiformis of other authors). As this table is just to the point, and as it moreover serves to intimate his view on the parasitic question, I make no apology for giving it from page 137 of his book:—

| "Eczema pilare faciei. | "Sycosis parasitica. |
|---|---|
| "1. Very common in this country. | "1. Not so common in this country. |
| "2. A pustular disease only. | "2. Pustules, tubercles, and large fleshy indurations detected when disease fully established. |
| "3. No trace of herpes circinatus either on the affected parts or in other localities. | "3. Rings of herpes circinatus (ringworm of body), sometimes detected amongst the hairs, and round the front of the neck, or on the wrists, arms, or other parts of the body. |
| "4. Not contagious. | "4. Contagious, and often history of contagion. |
| "5. Hairs healthy, and adhere firmly, so that epilation causes pain, unless much suppuration has occurred at their roots. | "5. Hairs brittle, broken or twisted; have lost their glistening appearance, are thick and, at times, white; can be extracted with perfect ease and without pain, and come away without their bulbs. |
| "6. No parasite to be detected." | "6. Fungus (tricophyton tonsurans) detected in some of the hairs and scales." |

Now as to the conclusion of my case. The pustules, indurations, and other signs, and the history of the case, inclined me to believe it to be one of parasitic sycosis.

At my last visit, I requested the patient to send me a couple of hairs from his beard. He wrote to me as follows:—"I had laid by two of the hairs as requested, but found to-day one of them was lost. It was too painful to attempt at the time to pull out any more; and I fear nothing can be gleaned from the one left, as it is quite dried up. I am now pretty much recovered, and expect in a few days to be all right again."

I examined this hair under the microscope, comparing it with the plates of *Microsporon Mentagrophytes* in Neligan's Atlas, the drawings of which, I may add, were made by Dr. Steele from a microscopic examination of a hair belonging to a patient of Dr. Neligan. I could not arrive at any satisfactory result, and having availed myself of the skilled assistance of Dr. Hewitt, of York-street, who kindly examined the hair for me, and allowed me to examine it with him, I ascertained his opinion, which was this:—"The hair was surrounded at the base by altered epithelium, and decomposed follicular secretion. There was not any evidence of the microsporon mentagrophytes." This being so, these two opinions were open to me:—1. Assuming, with Hardy, and some others, that sycosis is *necessarily* parasitic, to think that the case may have been one of sycosis, for the reason assigned by Dr. Fox (*vide supra*); or, assuming with Hebra and others, that the disease is only *accidentally* parasitic, to think that this was a non-parasitic case of true sycosis. 2. To look on it as a case of impetigo sycosiformis. I confess, I incline to the latter opinion, while I readily admit that much can be said for the former.

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ART. XVII.—*A Case of Operation for Cleft Palate on a Child, aged Five Years, with Success.* By F. A. PURCELL, M.D., M.R.C.S.; Physician to the Cork Fever Hospital, and Secretary of the Cork Medical Society.

JOHN CONNELL, aged five years, a fine, large, muscular child, the youngest of seven, five of whom died, which makes the parents most anxious about this one; on attempting to talk, he mumbles his words, unable to articulate, and can only be understood by his

parents. The soft palate is cleft from top to bottom, exactly in its mesial line, the mucous membrane is continuous over the hard palate, the edges of which are not in perfect apposition, a slight fissure existing in the bone, but only apparent to the touch; the gap in the soft palate observed when the mouth is opened being lozenge shaped, the sides at the centre of the fissure retract into the fauces on each side, and if the child cried, the portions of the palate become drawn so much to each side, as to present no palate whatever, here showing the action of the tensor palati and pharyngei muscles.

I determined to operate; accordingly, on Wednesday, July 18th, 1866, with the kind assistance of Drs. Johnston, Shinkwin, and N. J. Hobart, all of whom agreed that the case was a fair one for operation, we proceeded to work in my study; our patient, wonderfully strong, was anything but quiet, and determined to give every resistance. He was well secured by encircling legs, arms, and body firmly in sheets, and placed sitting on a chair; we allowed the father to be present, to exert his influence over him; a pillow lay across the back of the chair, on which the head was firmly held by Dr. Shinkwin from behind. I sat on a chair opposite him, with my back to the light; during the operation the head was turned to one side or the other, as required, so as to get as much light as possible on the part; the mouth was held open by means of one cork, with a fold or two of linen to prevent its being cut through by the teeth; the cork was long, so as to give a purchase, and I may here observe, as we only used one cork, that it was changed to one side or the other of the mouth, generally to the side opposite to the one operated on throughout. I used a long forceps, half an inch of the end curved nearly at right angles, having claw tops, the rest straight; with this I secured the left uvula, and passed at its base from before backwards, the needle armed with a silk ligature; this needle was curved, and the eye was two-fifths of an inch from the point, which I shall refer to again; all my ligatures were cut a yard long and waxed; the point of the needle brought to view posteriorly, one thread was seized with the forceps, and drawn out of the mouth, the needle then withdrawn over the other end, the two ends of the ligature were knotted; this I call the tension ligature (an improvement due to one of our Dublin surgeons, Mr. L'Estrange), the same was passed at the base of the right uvula; the left palate was now put on the stretch by pulling its tension ligature with the left hand to the right side of the mouth,

and determining with my index finger the position of the hamular process, I transfixed the palate perpendicularly and close to the hamular process from before backwards, according to Pollock's plan, using his spear-pointed double-edged knife, which is by the curve of its shank beautifully adapted for the division of the tensor palati muscle; passing the knife a little upwards and inwards, elevating then the hand, so as to cut the posterior fibres, I withdrew it; some oozing of blood followed; the palate became relaxed, thereby showing the muscle was cut. Our patient was now allowed breathing time. The right palate was made tense in the same way, and the knife this time in the left hand, transfixed and cut the tensor palati of that side; considerable oozing of florid blood here followed, which made me anxious for the moment, but it soon stopped; we now found by gently drawing on the tension ligatures of both sides that the edges of the fissure came nicely in apposition, thereby not requiring the division of the palato-pharyngeal muscles; this completed the first part of the operation. The second part—the paring of the edges—was long and tedious; using still Pollock's knife; the movement of the tongue being quite uncontrollable, the constant crying, and the exertions that each of my assistants were put to to keep the child still, and to keep the mouth open, were quite sufficient to impress each with the difficulty of operating on a child so young. The paring finished and time allowed for all oozing to cease, as also for my assistants to recover, we proceeded to the third stage—that of passing the ligatures; the mouth opened, and the fauces well mopped out, making tense the left palate by traction of its tension ligature, the needle armed, was passed close up to the edge of the hard palate from before backwards, and pushed on until the eye with the threads came to view, one of which was seized hold of with the forceps and drawn through and out of the mouth, the needle then withdrawn over the other end, the same as the tension ligatures were passed before; this then was our first single ligature passed only on the one side of the fissure. On the right side, and directly opposite the other, the needle armed was passed, the eye coming to view with the thread, the entire noose was seized with the forceps and drawn forward and placed over my little finger, the needle then withdrawn; into this noose the posterior thread of the single ligature of the opposite side was passed, and this noose, acting as an eye, drew the single ligature through the right side from behind forwards. The ligature was now drawn from side to side, to test

its proper insertion. I forgot to state that a knot was placed on the anterior thread of the ligature when it was passed through the left side, so as to mark the anterior from the posterior; as also, one knot indicated ligature No. 1, two knots on the second indicated ligature No. 2, ditto No. 3. Knots to correspond were placed on the other end of the ligatures when drawn through the right side. Ligature No. 2 was passed in the same way, about half an inch or less below the first; the child, by its exertions, defeated me in passing No. 3 through the sides of the uvula; the part being flaccid and giving way before the point of the needle, we determined not to mind it. I here removed the tension ligatures, and proceeded to tie the others. The way the ligatures were tied was by placing a slip knot of one thread over the other and running it down, but not too tight; this brought the edges of the fissure together, and over the slip knot was placed a simple knot, which quite secured the knots from giving; the edges of the fissure were in nice apposition, and the child now swallowed some sups of water and articulated clearly and distinctly, much to the gratification of its father. The exertion of the child did in no wise exhaust it; but my three assistants, to whom I can never return sufficient thanks, were completely done up. My little patient was allowed to go home, with directions to keep him quiet, to get nothing but drinks, with no solid food.

Thursday morning, 19th.—Slept well during the night; edges of the fissure in apposition, parts inflamed and œdematous; child talks fluently; the lower portion of uvula lies in apposition, but apparently not united.

Thursday evening.—Dr. Johnston saw the child this evening; he notices an islet hole at the apex, directly under the edge of the hard palate; the rest in apposition, except portion of the uvula, which will evidently not unite; tongue furred. Gave gr. iii. of calomel; to take a teaspoonful of castor oil in the morning.

Friday, 30th.—Child improved; craving food; the edges not united above at the apex for about the one-eighth of an inch; between the ligatures perfect adhesion; the uvula free.

The parts gradually got well, and I removed, on Sunday morning, the ligatures with rather some difficulty. The weather was very warm, and the child was allowed to drink freely of cold iced water. I determined not in any way to interfere with the ununited portions for the present. He talks fluently and distinctly. The operation is so far successful that I am sanguine

of making a perfect palate. The uvula portion has greatly shrivelled up, and if allowed to remain as it is, would not be bad. The hole at the apex admits freely the end of a drawing lead-pencil; this will, I have no doubt, close by the use of the nitrate of silver stick.

The case suggests many things to me—firstly, I quite agree with Mr. Pollock, that under fifteen years of age I would not operate, unless compelled so to do, as no one can imagine the labour to overcome the struggles of this child; and with any other assistants but those I had, I should have desisted. In a child the tongue is for ever in motion and in the way, and an assistant's hand while using a depressor is completely so; the movement of the tongue causes great delay in manipulating the instruments. Pollock's knife is admirable, but I would like two, one the present size, and the other with a narrow blade; the forceps I used could not be worse; one with a gentle curve of the blades, with a slide like Charrierès to close them, would be preferable, and would hold the mucous surface of the edges. My needle had the eye two-fifths of an inch from its point; the difficulty was in trying to bring the eye to view; the point was apt to stick either into the back or sides of the pharynx, and required great care; the eye then should be as near the point as possible, and the needle fine. It is doubtful to my mind but that silver wire is preferable to silk, except in a child; at all events the two upper ligatures might be silver, and the lower one silk, which may be less in danger of irritating the epiglotis. There is little danger of the sutures passing backwards.

Some improvement might be suggested for keeping the jaws apart—as a cork, such as I used, is rather clumsy.

# PART II.

## REVIEWS AND BIBLIOGRAPHICAL NOTICES.

*Dr. Chapman's Vaso-motor Therapeutics; Neuropathy, or Vaso-motor Therapeutics; a New Method of Treating Disease through the Agency of the Nervous System.* By JOHN CHAPMAN, M.D., M.R.C.P. *The Journal of Mental Science*, April, 1865.

*Diarrhea and Cholera, their Nature, Origin, and Treatment, through the Agency of the Nervous System.* By JOHN CHAPMAN, M.D., M.R.C.P.; M.R.C.S. Second Edition. London: Trübner and Co. 1866. Pp. 248.

MOST of our readers have probably seen in the weekly journals occasional references to Dr. Chapman's views. We believe them at least deserving of careful consideration, and it has happened to us to discover that they are sometimes but very indistinctly apprehended by those whose acquaintance with them has been made through these fragmentary notices. We therefore propose to give, as clearly as we can, in the space at our command, an exposition of them, offering as we proceed some observations which their consideration has suggested to us.

The most obvious purpose subserved by the nervous system in man is to bring him into relation with things outside him, to enable him to receive impressions from them and to exercise an influence over them. The performance of this function in health and its derangements in illness have therefore attracted attention most prominently; and under diseases of the nervous system have come to be included those only in which motion, sensation, or intellectuation was visibly disturbed. It was believed, indeed, that the operations which were incessantly going on within his body—nutrition, secretion, and visceral muscular action—were in some way under the influence of the nervous centres; but our knowledge on the subject was vague and amounted to little more than conjecture; now, however, minute anatomical investigations, experiments, and clinical observations, the true interpretation of which had been previously overlooked, have given us information,

far, indeed, from being as precise as we could wish, but still sufficient to guide further inquiry, and even to justify us in forming provisional theories as to the nature of some diseases, and as to the direction which our plans of treatment should take. Those who have made themselves sufficiently acquainted with recent investigations into the physiology of the nervous system, have been already guided to important discoveries in pathology and therapeutics; such theorizing, therefore, if based on adequate knowledge, is not useless, nor is it unsafe, provided we remember that our information on many points is yet so defective, and the data on which we proceed so doubtful, that no matter how logically we reason, our conclusions must inherit the uncertainty of the premises, and we must be prepared to abandon them if they fail us when actually tried; for it has unfortunately been too often the case that results confidently anticipated have, to the eyes of the original observer, appeared to occur in a manner which subsequent experience has failed to confirm, and which, had he been sufficiently alive to the inherent uncertainty of his conclusions, would not have impressed him. No one who is at all conversant with the brilliant discoveries in physiology, which have been made during the last few years, can entirely resist the temptation of using them to help him to the solution of obscure problems in pathology, and to guide him to some safe principle in treatment; but at present they can only show him the direction in which to look, they cannot tell him what he is to see; and if we expect infallible guidance from them we will only fall into the error of persisting in theoretic treatment, an error which has already left its lamentable records in the history of medicine. Nor must we imagine, as Dr. Chapman seems to do, that with this one key we can unlock all the mysteries of disease. Poisons gain access to the body, and other agencies in various ways act upon it; but, according to his sweeping generalization, the more the effects of these are studied—

"The more convinced pathologists become that they are immediately dependent on morbid states of the nervous system, which is primarily affected—its departure from health being first denoted by a disorder of its own circulation, which subsequently originates those derangements of circulation of various kinds in various parts of the body, variously denominated as special diseases, according to their localities and peculiarities."

With the view at first it would appear of acting only on the

prevertebral ganglia, and through them on the circulation in different parts of the body, Dr. Chapman began to apply hot water in some cases, and ice in others, to the spinal region. He obtained the results he anticipated, and some others as well. He applied heat along the spine of a feverish patient; the skin became comparatively cool, but it became moist at the same time. He applied heat between the scapulæ of a patient who had bronchitis; the amelioration of the symptoms led him to the conclusion that while the amount of blood in the inflamed membrane was lessened, secretion was increased, and contrariwise ice applied along the spine of a patient whose skin was cold and unduly moist, caused the surface to become warmer, and at the same time drier.

"The above-mentioned facts," he says, "and others to which I shall briefly refer, lead me to the conclusion that *all* secreting organs are supplied with nerves acting directly upon their constituent cells, which become active or passive according to the amount of nervous influence distributed to them; that their elective affinity for the particular elements of the blood which they separate from it, and the force of their attraction for blood on which to operate, are exclusively due to and dependent on that influence; that when that influence is exerted in a maximum degree, the attractive force exerted by the gland-cells on the blood is so great that it counteracts and neutralizes the contractile force of the muscular coat of the arteries from which they derive the blood they require, and therefore, that while hyperemia of the nervous centres lessens the general blood-supply to the periphery of the body, by causing contraction or tonic spasm of the peripheral arteries, that same hyperemia generates and transmits to the gland-cells a preternaturally strong nervous influence, enabling them to draw copious currents of blood to themselves through their special arteries, notwithstanding that they are at the same time subject to the maximum of contractile force, and that the peripheral arteries generally are in a condition of anemic spasm."

This he offers only as a provisional explanation of the phenomena, and we certainly feel some difficulty in accepting it. If the gland-cells of the skin under stimulation from the nervous centres draw copious currents of blood to them for secretion, so must—as indeed Dr. Chapman specially mentions in another page—the ultimate cells which keep up the nutrition of the tissue; and if there be copious currents of blood and increased molecular change, we cannot conceive how the skin becomes cooler. The conclusions to which he has been led he finally embodies in the following propositions:—

"1. That the chief function of the sympathetic nervous system consists in regulating the diameters of the blood-vessels throughout the body.

"2. That when the sympathetic ganglia are in a state of maximum hyperemia the nervous effluence from them to the muscular coats of the arteries to which they are severally related stimulates them so excessively as to induce in them a condition of tonic spasm—a spasm so intense as to result in shutting off the blood altogether from a large proportion of the peripheral arteries.

"3. That when the sympathetic ganglia are in a state of maximum anemia the nervous effluence from them to the muscular coats of the arteries to which they are severally related becomes so extremely feeble that a condition resembling paralysis is induced; the muscular coats of the arteries become consequently extremely relaxed; and, as the blood flows in the direction of least resistance, the parts supplied by the arteries in question become suffused with blood to an excessive degree.

"4. That when the spinal cord is in a state of hyperemia, cramps of the involuntary muscles surrounding the alimentary tube as well as cramps, or even convulsions of the voluntary muscles, which are due to such hyperemia, are likely to ensue.

"5. That every gland and glandular follicle in the body is under the control of one motor nerve (which I call the *positive motor*) emerging from the cerebro-spinal system, and distributed to its secreting cells in order to regulate its functional activity; and of another motor nerve (which I call the *negative motor*) emerging from the sympathetic system, and distributed to its artery or arterial twig, in order to regulate its blood-supply.

"6. That in the same manner as glands are supplied with positive, as well as with negative, motor nerves, so, there is reason to believe, every tissue of the body is thus supplied, and is thus placed and sustained in a state of elective affinity for the elements of the blood requisite for its nourishment and functions.

"7. That the sympathetic ganglia and the spinal cord can be rendered hyperemic or anemic, artificially, by means of heat, in the one case, and cold in the other, applied along the spine.

"8. That by means of heat applied along the spine the general circulation may be lessened, the activity of the glandular system may be increased, and, in some cases, cramps of both the voluntary and involuntary muscles may be induced.

"9. That by means of cold applied along the spine the general circulation may be increased, the activity of the glandular system lessened, and cramps of both voluntary and involuntary muscles may be arrested or prevented."

It may be conceded, we think, that the first three of these propositions are in accordance with the results of experimental

investigation, though there is a difference of opinion among physiologists as to the real vaso-motor centres, and though some of the most distinguished place them in the spinal cord, or in the medulla oblongata, there can be no question that the nerve fibres, which transmit the influence to the vessels, pass through the prevertebral ganglia, and that destruction of these masses on the one hand, or galvanization of the nervous cords issuing from them on the other, permits a full current of blood or narrows the vessels. For the assertion in the fourth postulate that hyperemia of the spinal cord is likely to produce cramps of the involuntary muscles surrounding the alimentary canal, we are not aware that there exists any proof. All evidence goes, we think, the other way. "The cerebrum and spinal cord exert no influeuce of the kind," says Romberg.[a] "Experimental irritation of the brain or cord produces no evident or constant effect on the movements of the intestines during life,"[b] says Kirkes. We do not as yet know to what extent the sympathetic is connected with the cord, nor how far the former is dependent on the latter as the ultimate centre of the powers which appear to be its especial possession. Possibly, as we have just observed, some portion of the cerebro-spinal mass may prove the real centre of those vaso-motor nerves, which appear to have their origin in the prevertebral ganglia, and such, too, may be the case with the nerves which regulate the involuntary movements of the intestines; but the fact remains that while irritation of the solar plexus or of the vagus nerve produces peristaltic movements, irritation of the cord does not, and to a similar conclusion are we led by clinical observation. Diseased conditions of the cord produce paralysis or spasm of the rectum and of the bladder, which, through the sacral plexus, derive a *direct* supply from the cord, but exert no influence on the small intestine or the colon.

We have already mentioned the original observations which suggested to Dr. Chapman's mind the existence of nerves directly presiding over secretion and nutrition, and distinct from those which regulate the supply of blood. In this conclusion, however, he supports himself by the observations of Bernard, who found that while the sympathetic regulated the supply of blood to the submaxillary and parotid glands, their secretive activity depended on the chorda tympani and auriculo-temporal, and by the minute

[a] Diseases of the Nervous System.—Sydenham Society's Translation, Vol. ii., page 10.

[b] Handbook of Physiology, 5th edition, page 290.

microscopic investigations of Pflüger, who, in the case of the submaxillary, traced the filaments of the chorda tympani into the nuclei of the gland-cells; these views have indeed obtained the sanction of our most careful physiologists. It is admitted that while stimulation of the sympathetic, by constricting the blood-vessels, diminishes secretion, irritation of these other nerves is followed by dilatation of the vessels and increase of secretion. We would here remark, however, that Dr. Chapman, in his subsequent reasoning, has assumed these nerves to possess a power which, as far as we know, no experimenter has as yet attributed to them, that of augmenting secretion, and drawing an increased supply of blood to the tissue *in spite* of excitation of the sympathetic. Indeed, Bernard supposes that their action is inhibitory; that it is only through their power of paralysing the vaso-motor nerves they cause secretion. In this view of their action he is not supported by other physiologists; nevertheless, we have yet to look for evidence of their power to produce their effects, if the sympathetic is at the same time excited and the author's hypothesis requires this.

That hyperemia and anemia will produce respectively increase or diminution of the functional activity of these centres, may be admitted; that heat and cold applied along the spine will produce such hyperemia or anemia is a proposition of which, we need hardly say, we can have no proof except that derived from observing how distant organs perform their functions during the time these agents are applied. Beforehand it certainly seems improbable that the spinal cord, shut up within its bony case or the prevertebral ganglia, with the heads of the ribs and a mass of muscles interposed between them and an ice bag, and with the warm viscera of the thorax and abdomen exercising a counteracting influence on their inner side, could have the circulation of blood within them materially affected by any amount of cold short of that which would prove injurious to the external parts. However, if results are obtained by other physicians at all confirmatory of Dr. Chapman's observations, we must not allow the apparent improbability to prevent our acceptance of his conclusions.

We now come to consider the author's reading of the phenomena of cholera in the light of these propositions; he says:—

"6. The pathological doctrine, the truth of which I hope to prove to the satisfaction of every competent judge, may be concisely embodied in the four following propositions:—

(I.) All the phenomena of cholera are due to simultaneous hyperæmia of the spinal cord and of the sympathetic nervous system.

(II.) All the phenomena of cholera are naturally divisible into two classes, accordingly as they are referrible to the spinal cord, or to the sympathetic ganglia as their cause.

(III.) All active or positive phenomena are due to hyperæmia of the spinal cord.

(IV.) All passive or negative phenomena are due to hyperæmia of the sympathetic ganglia.

"7. The symptoms of cholera are ranged in the following lists as positive or negative phenomena according to my conception of their proximate cause:—

| POSITIVE PHENOMENA. | NEGATIVE PHENOMENA. |
|---|---|
| *a.* Abnormally copious and pale urine. | *a.* Slight headache. |
| *b.* Albuminous urine. | *b.* Deafness of various grades. |
| *c.* Abundant secretion of bile. | *c.* Tinnitus aurium. |
| *d.* Abundant secretion of pancreatic juice. | *d.* Dizziness, slight faintness, syncope. |
| *e.* Borborygmi. | *e.* Drowsiness, sleeplessness. |
| *f.* Excessive activity of the mucous membrane and of all the glands of the alimentary canal. | *f.* Mental state. |
| *g.* Abnormally high temperature within the rectum. | *g.* Absence of tears, saliva, bile, and urine. |
| *h.* Excessive activity of the mucous membrane of the gall ducts and gall bladder, of the pelves of the kidneys, and of the female genital organs. | *h.* Short, struggling, and rapid respiration. |
| *i.* Abdominal gripings. | *i.* Cold breath. |
| *j.* Excessive expulsive activity of the stomach and bowels. | *j.* Enfeeblement of the voice, aphonia. |
| *k.* Simultaneous excessive activity of thoracic and abdominal muscles. | *k.* Oppression and burning pain at precordia and left epigastric region. |
| *l.* Sweat in all its grades of copiousness, and fluidity. | *l.* Algide symptoms: Progressive changes in the visage, and in the colour, temperature, and general aspect of the skin. |
| *m.* Derangements of sensibility. | *m.* Loss of cutaneous sensibility. |
| *n.* Tremors. | *n.* Serous exudation into the intestines. |

*o.* Muscular twitchings.

*p.* Fixed, stoney expression of the face.

*q.* Tonic hardness of muscles.

*r.* Tightness across the lower part of the chest.

*s.* Cramps and convulsions.

*t.* Extreme contraction of the urinary bladder.

*u.* Restlessness and tossing of the limbs to and fro.

*o.* Epithelial exfoliation of the intestinal villi.

*p.* Enfeeblement and death of the voluntary muscles.

*q.* Enfeeblement and death of the involuntary muscles, cessation of discharges, secretion still continuing."

The abnormally copious and pale urine and the albuminous character which it presents, in some cases, during the period of invasion, he considers caused by excessive stimulation of the secreting structure of the kidneys by the cerebro-spinal system, before the renal arteries have had their calibre contracted by hyperemia of the sympathetic ganglia; superabundant secretion of bile at the beginning of the attack, and the excessive flow of pancreatic secretion, which he supposes to take place, he attributes to the same cause, and extraordinary secretion of air within the bowels, giving rise to borborygmi, he has observed to occur when heat has been applied to the spine; the white flocculent matter found in choleraic stools and in the intestines after death, has been, by many observers, recognized as epithelial cells, and is, therefore, an evidence of excessive activity of the secreting structures of the mucous membrane, and this, according to the author's theory, similarly finds its explanation in the hyperemic condition of the cord; the gripings, the muscular twitchings, the tremors, the cramps, and the contraction of the bladder, are due to two conditions, the muscles are rendered anemic, and, therefore, unduly excitable, by the sympathetic constricting their arterial twigs, and they, therefore, respond the more readily to the stimulus which flows to them from the excited cord; the tightness across the lower part of the chest is mainly due to tonic spasm of the diaphragm. The aching and other uneasy feelings in the head, the drowsiness in some cases, and sleeplessness in others, are brought about by varying degrees of cerebral anemia, the result of hyperemia of those ganglia, from which are derived the vaso-motor nerves

which twine around the arteries of the brain; in the same manner the cutting off of the vascular supplies to the liver and kidneys, the author argues, soon puts a stop to the secretion of bile and urine, which the unwonted stimulus from the cord at first produced; but the lachrymal, the parotid, and the submaxillary glands deriving no supply from the cord, but instead, receiving in addition to sympathetic filaments, only cerebral nerves, are from the very beginning of the attack, in a condition unfavourable to secretion. Their supply of blood is lessened by the sympathetic, while the anemic brain fails to send them their usual amount of stimulation to secretion, hence tears and saliva are from the first arrested. Owing, in the same manner, to the undue activity of the sympathetic the vascular fibres of the bronchial tubes contract spasmodically and refuse to admit air, and the walls of the smaller pulmonary arteries obstruct the flow of blood, and so the respiration becomes short, struggling, and rapid; spasms of the cutaneous vessels gives rise to the paleness and coldness, and by depriving the blood in the veins of the vis a tergo, permits livid congestion to occur; the same arterial constriction, combined with "tonic spasm of the facial muscles," accounts for the cholera aspect; here, however, we do not quite see how the argument holds since the facial nerve is not a spinal one; and Dr. Chapman has specially mentioned the exemption from excitation of one of its branches, the chorda tympani, in accounting for the submaxillary gland not sharing in the stimulation to secretion felt by the other glands. One of the most striking phenomena of cholera remains to be accounted for, and we can hardly say that the explanation commends itself to our judgment:—

"42. (*n*) *Serous Exudation into the Intestines.*—The group of algide symptoms so pre-eminently observable in the skin, are present, and are produced in the same way, though in different degrees, if my hypothesis be correct, in every part of the body. But in the intestines special conditions obtain: as already explained, the positive motor nerves of the alimentary mucous membrane and intestinal glands being in extremely predominant and energetic action, a large amount of blood is drawn by them through the intestinal arteries, is passed through the glandular capillaries, and is forced into the intestinal veins. But while the venous blood generally is hindered from passing freely through the lungs, by contraction of the pulmonary arteries and bronchial tubes, that in the intestinal veins is arrested, simultaneously with the secretion of bile, by the intensely energetic action of the hepatic negative motor nerves, which, bringing the functions of the liver to a stand, prevent the passage of any blood through

it. Thus, while on the one hand the excessive secretive activity of the intestinal mucous membrane and glands is causing an excessive amount of blood to be compressed by the agency of their capillary force into the intestinal veins; on the other, the blood so forced into them having no normal exit, first distends them to the utmost, and then the serous, or most fluid part of it, oozes through them—their extremely thin walls being rendered still thinner, and therefore extraordinarily permeable, by the distention to which they are subject. Hence the exudation of the enormous amount of serous fluid which is discharged by cholera patients, which, as well as the œdema of the intestinal walls and the serous infiltration beneath the epithelial sheaths of the villi contributing to their exfoliation, is not only accounted for, but shown to be absolutely inevitable."

Constriction of the hepatic artery can of course only arrest the secretion of bile by impairing the nutrition of the secreting cells; it is no uncommon thing for patients, within one or two hours of the beginning of their illness, to eject quarts of fluid from their bowels; is it possible for the nutrition of the liver to have become so profoundly altered in so short a period that though portal blood is brought to it, it cannot pass it on? Neither does Dr. Chapman offer any hypothesis to explain how it happens that the secreting cells of the liver enjoy none of that power of drawing to themselves the copious currents of blood, which, according to his theory, the secreting structures of the mucous membrane possess.

Some facts connected with cholera have yet to be noticed, which we think do point in the direction indicated by Dr. Chapman's theory. The occasional increase in the temperature of the body just before, and more frequently after death, looks like a returning current through the capillaries after the death of the nervous centres has permitted relaxation of the minute arterial twigs; the *post-mortem* muscular contractions too, which at times are noticed, seem to point to the supply of the muscles with something which temporarily restores their excitability; the early onset of rigor mortis is observable, just as was seen when the sympathetic had been violently stimulated by galvanism. He likewise draws attention to the fact that the causes which seem to influence the spread of cholera, and to expose individuals peculiarly to its attacks, are causes which are either known or may be reasonably supposed to produce abnormal susceptibility of the nervous centres, solar heat, wide ranges of temperature, malaria, fatigue of body, anxiety or depression of mind, intemperance, and the use of purgative medicines, which may set up

reflex irritation of the centres; these and other influences, which operate similarly, the author discusses in detail.

Such is his pathology; there are no well-authenticated records of changes being found after death confirmatory of his views. He says we must not expect them, as the condition is likely to pass off after death, so we are left to conjecture. We find a difficulty in accepting it as probable that hyperemia of the spinal cord would occur epidemically and never be accompanied by a similar condition of the brain. Certainly where the membranes are affected the cranial portion of the mass does not enjoy a similar immunity. Moreover, if we remember that the prevertebral ganglia send back true sympathetic fibres, which enter the ganglia on the posterior root, and also the anterior root of each spinal nerve, and some of which unquestionably are the vaso-motor nerves of the cord, hyperemia of the ganglia should prove curative of hyperemia of the cord. Besides this, in all diseases in which we know the cord is hyperemic, or in which its functional activity is increased, as the author supposes is so eminently the case in cholera, we find extreme susceptibility to manifest reflex phenomena, in tetanus and in the early stages of myelitis touching the extremities, the introduction of a catheter, or the administration of an enema, commonly provokes a convulsive seizure, but nothing of the kind has been observed in cholera.

A chapter on treatment, followed by a detail of cases, concludes the work. The distinctive characteristic of Dr. Chapman's treatment consists, of course, in the application of ice to the spine during the algide stage, and of heat, if required, to moderate the reaction in the secondary fever. The details of the treatment are explained at considerable length; attention to many auxiliary matters is insisted on, and without this, no one is justified in trying the plan recommended at all; for these, if unfortunately any of our readers have again to treat epidemic cholera, as sooner or later, no doubt, they will, we must refer them to the work itself. We have read over the cases of diarrhea narrated in one of the early chapters, as well as those of cholera in the concluding one. On others they may leave a stronger impression; to us the cases of diarrhea were not very convincing, as we have seen results as favourable follow confinement to bed, and restriction to arrowroot diet without treatment. The author's experience of cholera was gained at Southampton, under circumstances very unfavourable for the satisfactory trial of any treatment. According

to his own estimate, "nearly two-thirds of the patients treated by ice recovered; more than two-thirds of the patients submitted to ordinary treatment died." What induces us, however, to recommend that Dr. Chapman's treatment should have a more careful trial is not the results thus expressed in numbers, but the circumstance that symptoms seemed, according to his notes, to be often distinctly under control by the spinal ice-bag, and in the case of cerebro-spinal meningitis, lately recorded by Mr. Morgan, it certainly appeared, as far as could be inferred from symptoms, to exercise some influence over the circulation, whether this influence is exerted in the manner Dr. Chapman supposes, is another question. By means of his spine-bags he has supplied us with an efficient mode for applying heat and cold which we formerly did not possess. We purpose trying their effects in some of the simpler forms of disease, and we recommend those of our readers who have an opportunity to do the same. The work on Cholera is well and clearly written; and the reader finds no difficulty in following the author in his attempt to unravel the obscure phenomena of the disease.

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1. *Traité de Medecine Operatoire, Bandages and Appareils.* Par Le Docteur Ch. Sedillot. 2 Vols. 8vo. Paris, 1865. Bailliére. Illustrated.

2. *Manual of Surgical Operations.* By Joseph Bell, F.R.C.S. Edinburgh: Maclachlan & Stewart. Pp. 267, small 8vo. Illustrated.

3. *Surgical Observations, with Cases and Operations.* By J. Mason Warren, M.D., Surgeon to the Massachusetts General Hospital. Boston: 1867. Ticknor & Fields. 8vo. pp. 632. Illustrated.

In this third, and much enlarged, edition of *Sedillot's Operative Surgery*, many additions and improvements will be found over those published in 1839 and 1853. In the first place, the illustrations are enhanced in value by chromo-graphic colouring of the arteries and veins—an improvement which speaks to the eye, and needs no words to commend it. Some of the woodcuts, however, ought to have been replaced by more modern work; for example,

Fig. 192, where we have a picture of an amputation, which is scarcely surpassed for ludicrous absurdity by the similar scene in Scultetus. A patient, with placid countenance, seems borne in mid air (for he rests on nothing), in a sitting posture, over a tub, whose ancient staves are scarce held together by a few indifferent hoops. Round him, in various postures, are six *aides*, of frightfully intense countenances, and hair *a la Joinville*. The operator, in an evening coat, and white Russia ducks, tightly strapped over the smallest of boots, is ineffectually endeavouring to kneel (the ducks make it impossible). There is no sign of chloroform—internal evidence of the antiquity of the scene, if the costume alone did not afford it. We cannot conceive the good of retaining such illustrations. The eight figures are crowded into a woodcut $3\frac{1}{4}$ inches by $2\frac{1}{2}$. As a rule, however, the illustrations, although very small, are clear and good. Many insignificant operations have been omitted, as also many of those slight variations in operative procedure, on which the French especially delight to found claims for originality. This is a move in the right direction; for assuredly no sensible man should care to have an operation named after himself, on the ground of its varying in some trifling manner from a former method. Such pettiness is deserving of discouragement, and we are glad to see some evidence of a determination in M. Sedillot to concentrate his labour on more important matter. In the department of minor surgery there is much that is new, although the book is necessarily inferior in this part to the very complete and beautiful work of Goffres, which we noticed some years back. Still, since the publication of the latter, there are additions of value, such as the porcelain probe, for exploring gunshot wounds, brought into notoriety by the wound of Garibaldi. There is no notice in Sedillot's book of L'Estrange's little drum; or, as it might be called, the reverberating probe. Had the surgeons, who did not cover themselves with glory on the occasion alluded to, possessed the simple little instrument brought into notice by Mr. L'Estrange, and used in Dublin for the last quarter of a century, they would not have given their French consultant his easy triumph. For the information of those who have not seen it, we may state that the instrument consists of a small circle of light wood, mounted on a stem which can be readily fastened to a probe, or sound, and that it has the power of conveying to the ear, as well as to the finger, an appreciation of the material, whether calculus, metal, cloth, bone, or flesh, with which the point of the probe comes into contact.

Of other, and more imposing, if not always more important, novelties in the domain of operative surgery, there is no lack. There is an intelligent appreciation of the value of *écrasement linéaire*, and of cauterization by arrow heads, and other methods of employing caustics in lieu of the knife. Sedillot's opinion, in one word, is, that however valuable, they will remain exceptional in their application, and will not displace the knife. This is in accordance with common sense, if not with the enthusiastic anticipations of their inventors and advocates. Similar remarks apply to the use of drainage tubes, which have their advantages, but must not indiscriminately displace free incision in suitable cases. Against metallic sutures he is too prejudiced to be impartial. Much of his prejudice arises from the bugbear of French surgery—a dread of pyemia. Union by primary adhesion is a thing unhoped for by French surgeons, as a rule; hence a reluctance to use any dressings that will too closely approximate the edges of a wound, as they believe that such practice leads to the enclosure of pus in the deep parts of the wound, with the certain result of their *infection purulente*. We have met no notice of acupressure in these volumes, nor is the acquaintance with foreign literature one of their marked features. M. Sedillot gives a fair account of the origin of anesthesia, although in some particulars it is not quite accurate, and in others not complete. As we have never seen a perfect account of it in print we avail ourselves of the opportunity of giving a brief *resumé* of its history, and of apportioning the credit to the several persons to whom the honour of this precious boon to the suffering is due. The germ of anesthesia is to be found confessedly in a suggestion of Sir Humphry Davy. In his lectures, he throws out the hint that possibly nitrous oxide, or laughing gas might be made available for lessening or destroying sensibility in surgical operations. In 1846, Mr. Horace Wells, a dentist, of Hertford, Connecticut, performed the first painless operation on man (extraction of a tooth) using this gas. He acknowledged that he got the suggestion from Sir Humphry Davy. Mr. Wells introduced anesthesia into practice, and the principal honour is undoubtedly due to him. By a strange fatality it caused his death. In the succeeding year he divided his femoral artery while partially under the influence of chloroform, his mind having become unhinged by disappointments connected with the subject of anesthesia.

Dr. Morton, of Boston, aware of Wells' operations, repeated them. Dissatisfied with the agent, he made trial of sulphuric ether, and

thus made the second and, perhaps, most practically important step. His assistant or partner, a man of the name of Jackson, tried to secure the glory for himself, and for some months there was a hot dispute, not only in America, but in France also, as to which had the priority. The Parisian Medical Society undertook the task of deciding the point, and having heard evidence from Morton's law adviser, and from a pupil of Jackson's, they decided in favour of Morton, after a long and patient investigation.

Of the mode in which Sir James Simpson became acquainted with the merits of chloroform, the profession is fully informed; and in this country the worthy baronet carries off, at least, his full share of credit in the introduction of anesthesia.

Briefly, the case is that Sir Humphry Davy first suggested it, Wells first introduced it, Morton first made it generally practicable, and Sir James Simpson brought it to perfection. The Americans, as is well known, demur to the last part, as they still prefer ether or mixed vapours to chloroform. But as to the relative merits of ether and chloroform, we do not intend to enter.

Attention has lately been drawn, by Althaus and others, to the decomposition of tumours by galvanic currents. The following extract will be read with interest:—

"Dr. Ciniselli, of Cremona, has proposed a new method, consisting in establishing an induction current between two needles, placed, one in the thickness of the tumour, and the other at a little distance. The needles, according as they communicated with the positive or negative pole, bring about decomposition or chemical cauterization, alkaline in the first case, acid in the second, and the resulting cicatrices are either soft and extensible, or dry and retracted at the will of the surgeon, according as he selects one or other current."

He wisely adds that further experience is needed of this mode of treatment.

In operations on the arteries we miss all notice of the now well established method of the late Professor Porter, for ligature of the common femoral. Whether this operation be accepted or "banished from surgery," it ought not to have been omitted. Still less excusable is the oblivion cast over Teale's rectangular flap; for this method of amputation has achieved more than a local renown. The method of the author (p. 444) is not a good substitute for it, although it may sometimes be of use as a substitute for the ordinary flap. As

applied to the leg it consists in forming a large external flap from the soft parts over the fibula, and from the external half of the gastrocnemius. In forming the flap, the point of the knife passes out a couple of inches higher up than the level at which it was entered, so that the flap is oblique, being longer at the back than in front. This method may be useful where a covering is not readily obtained from the calf alone; otherwise we can hardly approve of purposely dividing the gastrocnemius and making the muscular portion of the flap so ragged.

In the chapter on resections no mention is made of Mr. Butcher's statistics, those referred to being Heyfelder's and Lefort's, and we may add, *en passant*, that Butcher's saw is also ignored. This is not surprising, inasmuch as the ordinary saw in use for amputations in France has been, for centuries, a bow saw with a blade capable of being detached, and of being tightened by a screw, and also of being arranged at any required angle. In fact the saw is figured in Scultetus. The modification effected by Mr. Butcher did not, therefore, attract the same attention in France as it did in these countries, where the somewhat clumsy meat saw was the one chiefly in use. On the other hand there is an intelligent appreciation of Mr. Butcher's " very rational " proceeding for resection of the wrist, whereby he preserves the extensor tendons of the thumb.

In the chapter on section of nerves we miss Moore's or Hilton's operations for division of the gustatory in cancer of the tongue. Sedillot's own modification of the operation for removal of the tongue is worth a passing note. He divides the lower jaw, not by a straight vertical cut, but obliquely by a notched or serrated margin. By this simple device, perfect apposition of the fragments is insured without the necessity of boring the bones and transfixing it with wire.

When treating of the forced dilatation of stricture of the urethra, Perréve's very crude method, and his first feeble clumsy instrument alone is depicted and commented on with less than the faintest praise, while Holt's name is not even mentioned, and the admirable results of his method are apparently unknown. As far as Perréve was concerned the immediate plan would seem to have been consigned to the limbo of forgotten inventions.

In the history and description of Uranoplasty and Staphyloraphe there is much valuable information of a practical sort, but also much confusion of authorities; in fact, as a history it is not reliable; but as this subject belongs especially to Mason Warren, we shall leave it for the present.

The volumes of M. Sedillot are a perfect mine of operative surgery, and for a reference will be of great value. If we have dwelt rather on deficiencies and errors, it is for the purpose of obtaining their correction in future editions, and so aiding to render a valuable work as nearly perfect as possible. Sir Philip Crampton becomes A. Crampton of Manchester, and Baker Brown, of London, becomes Backer Brown; but it is vain to expect from the foreigner correct spelling of our barbarous names, and on the whole the sins in this respect are wonderfully few.

Mr. Bell's admirable little manual contains a mass of condensed information on most of the operations that a surgeon is called on to perform. There is, perhaps, too great an amount of condensation, for clearness is now and then sacrificed. Generally speaking the descriptions are accurate and intelligible.

We find a statement, which does not surprise us, at p. 74, viz., that Piragoff has given up his own modification of Syme's operation. The reasons for so doing are that the portion of os calcis, which is retained, often becomes diseased; that union is slow; that the pad of the heel is too far forward, the weight coming on the insertion of the tendo-achillis, and that the stump is too long, no room being left for an artificial spring to supply the want of the arch of the foot.

In describing Langenbeek's modification of Warren's operation for fissures of the hard palate, the incisions along the alveolar ridge are represented as extending from the canine tooth in front to the last molar behind. This length of incision is quite unnecessary, one half an inch in length being generally ample. In fact there should be room to enter Langenbeek's elevator and no more.

As may be expected, and as the author says in his preface, the selection of operations shows northern proclivities. The name of the great surgeon of Edinbnrgh is met on many of the pages, as might be expected, where the author has been educated under his wing. We give him credit for avoiding causes of dispute, by making no mention whatever of acupressure or of any mode of arresting hemorrhage from operations.

The name of Mason Warren naturally brings to mind the subject of cleft palate.

The first glory of staphyloraphe belongs to Roux, that of uranoplasty to Mason Warren, for although Lemonnier operated for

fissure of the soft palate, exactly 100 years ago, viz., 1767, there is no record of his method, nor even of his success or failure. Graefe, who tried it in 1816, failed at first. Roux, in 1819, performed the first known cure of congenital fissure of the soft palate. He operated with great but not uniform success, his procedure being very mechanical, and his method of diminishing muscular tension being very unscientific. His incisions for this purpose were transverse, and cut off the soft palate from the palate bones, leaving often a permanent gap, to be filled by an obturator. Congenital fissure of the hard palate was not attempted by Roux. M. Sedillot's statements on this head are incorrect, on the evidence of Roux himself, whose book is open before us. He only performed an autoplastic operation in case of accidental holes, syphilitic or otherwise, in the hard palate; of these operations he had only four, and one at least failed.

Dieffenbach improved Roux's operation of the soft palate by making incisions parallel to the cleft, so as to relax the tension of the flaps. He also essayed to divide the bony palate and to approximate its edges by lead sutures. In this latter effort he appears to have been unsuccessful. Dieffenbach's date is 1834. Passing over the dietetic advances of Sir Philip Crampton, in 1842, we now come to Mason Warren, of Boston. Up to his time cases for operation had been limited to fissures of the soft palate, and of those to fissures of no great width, at least with a few exceptions; but we shall let Mr. Warren speak for himself:—

"The operation was at first deemed applicable only to fissures of the soft palate, which, of course, are almost the exceptional cases; as, out of from eighty to one hundred operations for fissure of the palate which have fallen under my own observation, in not more than a tenth, probably, of the whole number, was the fissure limited to the soft parts. Nearly all cases of fissure extending into the hard palate were rejected as unfit for operation, although Roux had suggested the idea of relaxing the soft palate by cutting it completely away from its attachments at the posterior edge of the palate bones. This operation is very likely to prove abortive, from the division of the vessels which supply the flaps with nourishment; and, even if it succeeds, it leaves an unnecessarily large aperture in the bones, still to be covered by artificial means. Being impressed by the very great proportion of the cases of cleft palate which were deemed incurable, I was led to perform an operation for the especial relief of the more extensive fissures, which include both the soft and hard palate; and, in April, 1843, I published, in the 'New-England Quarterly Journal of

of Medicine and Surgery,' an account of a new operation for the closure of fissures in the hard palate, together with a very important modification of the operation of staphyloraphy, as practised for the relief of fissures of the soft palate. The operation upon the hard palate (I quote from the description of my first case as reported at that time) consisted in 'dissecting up, with a long, double-edged knife, curved on its flat side, the membrane covering the hard palate, pursuing the dissection quite back to the root of the alveolar processes. By this procedure, which was not effected without considerable difficulty, the membrane seemed gradually to unfold itself, and could be easily drawn across the very wide fissure. A narrow slip was now removed from the edges of the soft palate and with it the two halves of the uvula. By this means, a continuous flap was obtained, beginning at the roots of the [incisor] teeth, and extending backwards to the edge of the velum palati. Finally, six sutures were introduced, on tying which the whole fissure was obliterated. . . . This patient returned home into the country at the end of three weeks; a firm, fleshy palate being formed behind, and half the fissure in the bony palate obliterated. In the following spring, I again operated on the remaining fissure in the hard palate, and succeeded in closing half the extent of it; the tissues yielding with some difficulty, owing to the induration caused by the former operation. The small aperture which remained, I directed to be closed by a gold plate.' I had, at this time, operated in this manner in fourteen different cases, 'which, with one exception, had terminated successfully, either in the closure of the whole fissure of both hard and soft palate, or so far that the aperture which remained in the bones could be easily closed by an obturator fitted to the adjoining teeth.'

"The improvement to which I have alluded, in the operation upon the soft palate, consisted in the relaxation of the tissues of the fissured velum, by means of incisions, made with strong curved scissors, so as to divide the attachments of the soft palate to the tonsil and to the posterior pillar; or, in other words, dividing the posterior pillar of the palate just where it begins to spread out into the velum. The effect of this incision is at once seen in the almost complete relaxation of the parts, so as to admit of their easy approximation and union by suture. At this time, I had met with no case in which this procedure failed to relax the parts, as I thought, sufficiently for the requirements of the operation; and, in the fourteen cases of operation of complicated cleft palate which I had then performed, I had met with but one unsuccessful result. In subsequent operations, however, I found that there existed, in some cases, an additional obstacle to the approximation of the flaps, which could be overcome as easily, and in the same manner, as the former. This obstacle consists of a band of firm tissue, extending above and behind the soft palate, and standing out in bold relief when that organ is put on

the stretch by drawing upon it with the forceps. This resisting mass, like the other, I have always divided by an additional stroke or two with the scissors, whenever the incision of the posterior pillar and adjacent mucous membrane has seemed insufficient properly to relax the palate. By this division of all the parts which oppose any active resistance to the approximation of the sides of the fissure, the operation, as I have performed it, was finally perfected in its essential features; and, since that time, I have known of no important improvements in it, except in a few matters of operative detail. During the past few years, however, I have generally abstained from the attempt to effect the entire closure of very extensive fissures in the hard palate, owing, in part, to the severity of the operation, but chiefly to the fact, that modern improvements in mechanical dentistry have furnished us with a most efficient and comfortable substitute for the natural hard palate, in the form of a metallic or hard rubber plate.

"By the introduction of these improvements in the plan and methods of operating, the surgery of cleft palate at once acquired a new and vastly enlarged importance. The operation of staphyloraphy, as invented by Roux, and practised by many surgeons, both in Europe and America, had been considered applicable only to simple fissures of the velum, a class of cases constituting but a very small fraction of the total number of cleft palates, and the very ones in which the need of surgical aid is least urgent.

"The highly successful results, however, which I was enabled to report in the treatment of cases which had previously been considered as beyond the aid of surgery, together with the encouraging success which had been already attained by Roux, Dieffenbach, and many other surgeons, from the operation in the soft palate, soon excited the renewed interest of the profession in this most distressing deformity.

"Mr., now Sir William, Fergusson, was led, in 1844, by the dissection of a specimen of cleft palate, to adopt a method very similar to mine; dividing the levatores palati muscles, with a slender curved knife, somewhat higher than in my procedure with the scissors, and dividing the posterior pillars of the palate in precisely the same manner as I had already described.

"The subject of cleft palate has been still further illustrated by several British surgeons of distinction; among whom Messrs. Avery and Pollock of London, Mr. Collis of Dublin, and Mr. Field of Brighton, are especially prominent. All these gentlemen have operated with the most perfect success upon fissures as well of the hard as of the soft palate, and they have all adopted the plan of separating the soft textures freely from the palatine arch. Mr. Pollock divides the palate muscles by a partially submucous incision, at a point near the hamular processes, where the fibres begin to spread out into the velum."

By these extracts it will be seen that Mr. Warren is really the author of Uranoplasty. He exhibits the magnanimity of all really great minds in giving due credit to all who have worked in the same field with himself. We give the results of his cases also in his own words:—

"The number of cases of cleft palate upon which I have operated by these methods is now about a hundred: of this number, in less than one-tenth was the fissure confined wholly to the soft parts; and, in at least three-fourths, the gap extended into or through the maxillary portion of the palatine vault. In not more than nine or ten cases, therefore, have I found it practicable to close the fissure, without first dissecting up the membranes from the posterior part of the hard palate, and cutting through the tendinous attachments of the velum to the ossa palati. I have in no case been deterred from operating by the extent of the deformity; and, in several cases of most formidable aspect, I have succeeded in improving the voice and facilitating deglutition, as completely as in even the simplest fissures of the velum. In one case of simple fissure of the soft palate, I was tempted to operate without first dividing the muscles. The edges of the fissure came so easily together, that any farther incisions seemed unnecessary; and for several days every thing looked fair. About the seventh day, however, the adhesions gave way, owing, as I believe, in part at least, to the imperfect method adopted. As to the proper age at which to operate, in one case of a fissure which extended but little more than through the uvula, I operated on a child of between six and seven years; but generally it is necessary to wait until the patient is old enough to fully appreciate the importance of the operation, and to submit patiently to pain and inconvenience; for this is one of the very few operations in which the use of anæsthetics is inadmissable. Under very peculiar circumstances, I suppose, ether might be administered, but not without some risk to the patient, and much embarrassment to the surgeon, from the constant flow of blood down the throat."

To this last paragraph we must needs demur, inasmuch as it is now fully established that chloroform can be given in these cases. Mr. Collis, of the Meath Hospital, gives it habitually, and has been thus able to operate with success on very young children. The blood gives less trouble than when the patient is conscious; it is more easily staunched by pressure, and what trickles back is simply swallowed. The danger from chloroform is no greater than in any other operation, and the relief from pain, and from subsequent shock and depression, is of the greatest importance. Of the advantages of early operation as regards the patient's education it is needless to

speak. Mason Warren's book is of great interest, independent of this his specialty. From cover to cover it is replete with practical information; it is the record of a working surgeon's experience. Nearly 400 cases are given in sufficient, but not wearisome detail, and are freely illustrated with coloured lithographs and woodcuts. The tabulated results of 154 cases of cancer will be scanned with much interest. The last chapter in the book "on Anesthetics" gives some interesting details of the first use of ether, which we should like to have copied did space permit. To the working surgeon this book will be of the greatest value. We shall only add that its get-up is in keeping, paper, print, and illustrations being all that could be desired.

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Since the above review was penned, in fact while in the act of correcting its proof, we have learned, with the deepest regret, that the distinguished American Surgeon, whose work we have but feebly noticed, has passed away. Dr. John Mason Warren died about six weeks ago, somewhat suddenly, from internal cancer. America has lost in him one of her ablest sons, one whose reputation had long since reached these shores, as an earnest worker and most successful Surgeon. This year has cost us many who stood in the position of well-nigh personal friends—the energetic Jobert, the philosophic Trousseau, the practical Velpeau, the young and vigorous and hearty Follin, and now John Mason Warren, who, though farthest removed by distance, was not less known or less esteemed than the rest.

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## *RECENT WORKS ON DERMATOLOGY.*

1. *On Diseases of the Skin: a System of Cutaneous Medicine.* By Erasmus Wilson, F.R.S. Sixth Edition. 8vo. London: Churchill and Sons. 1867.
2. *Journal of Cutaneous Medicine and Diseases of the Skin.* Edited by Erasmus Wilson, F.R.S. (Published quarterly). 8vo. London: Churchill and Sons. 1867. (Nos. for April, July, and October).
3. *On Diseases of the Skin, including the Exanthemata.* By Ferdinand Hebra, M.D., &c. Vol. I. Translated and Edited by C. Hilton Fagge, M.D. London. 8vo. Published for the New Sydenham Society. 1867.
4. *A Practical Treatise upon Eczema, including its Lichenous and Impetiginous Forms.* By Dr. M'Call Anderson, &c. Second Edition. 8vo. London: Churchill and Sons. 1867.

5. *Clinical Lectures (illustrated by Coloured Photograghs from Life) on the Diseases of the Skin.* By Balmanno Squire, M.B., F.L.S., &c. 4to. London: Churchill and Sons, 1867. [Nos. I. to IV.]
6. *Unhealthy Skin; its Prevention and Management: A Popular Treatise on Cutaneous Hygiene.* By Balmanno Squire, M.B., F.L.S. 12mo. London: Longmans, Green and Co. 1867.

In various numbers of this Journal, we have, from time to time, reviewed the progress of what we may call Dermatological literature; and, in accordance with our previous practice, we now proceed to make some remarks on several works which have been lying on our table, in some instances for a longer, in others for a shorter time.

To understand more clearly our status as regards this portion of medical literature, it may be well to recapitulate the dates of the latter reviews above referred to.

In our number for August, 1864, our readers will find a review of this subject in connexion with the following works:—

(*a*) *Blake's Translation of Caillault, on Diseases of the Skin in Children.*
(*b*) *M'Call Anderson's Practical Treatise upon Eczema;* and
(*c*) *Frazer's Treatment of Diseases of the Skin.*

In February, 1865, appeared a short notice of Mr. Squire's first *Photograph of Skin Disease*; and a review of Dr. Tilbury Fox's work on the same subject.

In November, 1865, a further review appeared in connexion with the following:—

(*a*) *Erasmus Wilson's Inquiry into the Relative Frequency, Duration, and Cause of Diseases of the Skin.*
(*b*) *Erasmus Wilson's Student's Book of Cutaneous Medicine.*
(*c*) *Hillier's Hand Book of Skin Diseases;* and
(*d*) *M'Call Anderson on Psoriasis and Lepra.*

In February, 1866, the subject was again noticed in connexion with *Belcher's Second Edition of Neligan on Diseases of the Skin;* and, lastly, in February, 1867, in connexion with *Nayler's Practical Treatise* on the same department of medical literature.

From all this it will appear that we have not omitted to notice the practical advancement of medical science as regards what is, by

some, called "cutaneous medicine;" and, therefore, it will be the less necessary in the present case to go over ground which we have trodden only a short time since.

*Wilson.*—As to Mr. Wilson's great work, comparatively little need be said. When a large book, on a special subject, has reached a sixth edition, within, comparatively, a few years, it may be deemed to have obtained as much eminence as any one could fairly desire. Of course it is not possible for us to go through this large work critically, or to enter into any lengthened controversy on any vexed questions contained in it—although some things contained therein are open to question. As to one prominent feature in the present edition we shall let Mr. Wilson speak for himself, as he thus does in the preface:—

"Elephantiasis Grecorum, the lepra melas and leuce of the ancients, or simply, leprosy, has long engaged our attention, and occupies a somewhat prominent position in the following pages. Our interest in this remarkable disease received its first impulse from the researches of Danielssen and Boeck, and was further stimulated by the very interesting antiquarian inquiries of Sir James Young Simpson, and by the occurrence of several examples of the disease in our own practice. More recently, our interest in that terrible malady has been increased by the evidence supplied to the Leprosy Committee of the College of Physicians, and by the unexpected discovery that the disease is spreading by degrees to the European population of our settlements in Hindostan and in the Indian Seas. Ten cases of leprosy have fallen under our observation during the current and past year, and certain important questions force themselves upon our attention; for example: How shall we protect our Indo-European population from the invasion of this disease? How shall we treat the disease when already established? and, What shall we do with our lepers in the nature of a refuge and an asylum? If, by the extension of territory, we subject our population to the invasion of a malady unknown to them at home, we incur the duty, as it seems to us, of finding the means of relieving them of that disease, when, unfortunately, they become the victims of its attack.

"In near association with leprosy is syphilis; the phenomena of the syphilitic poison are replete with interest, and the closer we investigate those phenomena, both in respect of contagion and manner of evolution and development, the more we are assured of our power and mastery over the disease which that poison is capable of engendering. The syphilitic poison, in its manifestation by the skin, has the remarkable property of simulating the common characters of the exanthematous

fevers, and of presenting, at different periods of its existence, the whole of the recognized pathological lesions of the cutaneous tissues; one while it gives rise to an erythema, then to a papule, next to a pustule, a vesicle, or bulla; again, to a tubercle, a squamous exfoliation, an ulcer, or a crust; and finally to a macula and a cicatrix. Our attention was early attracted by these curious and extraordinary phenomena, and to the interest so excited is due the extensive elaboration and considerable space which we have devoted to the subject of constitutional syphilis.

"The present edition has been carefully revised, in many parts re-written, and our attention has been especially directed to the practical application and improvements of treatment. And, in conclusion, we venture to remark, that, if an acute and friendly critic should discover any difference between our present opinions and those announced in former editions,[a] we have only to observe, that science and knowledge are progressive, and that we have done our best to move onwards with the times."

One of the changes of opinion of which we find evidence in this edition is as to the matter of classification, Mr. Wilson having in the present case adopted what he put forward in his *Student's Book*, under the name of a "Clinical Classification." As we have already given that classification in full in our review of the last named work, it will not be necessary to advert further to it here, save to give a reference to the remarks which we made thereon, and which apply in this as in the former case.

With reference to the above quotation from the preface, the following remarks on page 670, regarding the existing forms of elephantiasis, are somewhat to the point:—

"Taking a mental survey of that grand, that elephant disease, the leprosy of the middle ages, which forms so prominent a feature in the history of Europe, and especially of Great Britain, of which examples have not very long vanished from our land, the question naturally arises to the mind, And is it gone? And if it be gone, has it left no remains behind? Are there no traces of THE leprosy? Is there nothing at the present hour which belongs to, is a part of, is a living record of that immense disease? Can our medical antiquaries discover no impression of its gigantic footsteps? Has it passed away like a shadow, or like the wind, totally, and never to be seen again? To which we answer, It would be contrary to all analogy to suppose that it had so totally passed away as not to leave a trace; and yet no sign exists in the records of

"[a] The dates of the several editions of this work are: 1842, 1847, 1851, 1857, 1863, 1867."

medicine to tell us that such is not the case. But though the sign may be absent in the records of medicine, the infallible sign remains imprinted on man. Leprosy exists amongst us still, but only as a faint trace of a worn-out disease, or as an emblem of the burnt-out fire. God forbid that the spark should be rekindled! We repeat, that elephantiasis still exists amongst us in this country as a *faint trace* of its former self, and the observation of that trace, however faint, becomes a matter of interesting research. Although a mere shadow in comparison with the parent disease, it is nevertheless sufficient to occasion considerable annoyance to the sufferer, and to bring him not unfrequently under the inspection of the medical man. Nor, when once pointed out, can the medical man doubt for an instant the nature of the disease which he has before him: there is the insensibility, the metamorphosis of tissue, the blanching, the exhaustion of function, and the atrophy of the parent malady, with all their original distinctness, indeed, one complete symptom of the pure elephantiasis, preserved unchanged, as it existed amongst the Hebrews, and as it is to be found at this moment on the shores of Norway, the symptom which was called by the ancients *morphœa*."

The fifth edition of this work contained 784 pages, while the sixth contains 931. No small part of the new matter occurs in Chapter XIX., on "Leprous Affections;" and on this chapter we may, perhaps, be allowed to make a few remarks.

First, then, we protest, in the name of medical scholarship, against a writer of so great authority and of such eminence as Mr. Wilson—we protest, with all courtesy, against his making many historical statements, in this chapter particularly, without giving his authorities. On p. 591, he commences a very excellent and clear historical statement respecting ancient and mediæval leprosy. On that page several names, dates, and localities are mentioned, without giving the reader any intimation whence the information is derived, or how far it may be relied on, for purposes of quotation, as accurate. In one instance only on this page is an authority given, and that is with reference to a historical statement respecting Bodmin in Cornwall, which now appears for the first time. It must be said, however, on the other hand, that this defect is only observable where *home* authorities are concerned. Foreign authorities are much more frequently given. Let any one read Mason Good's *Study of Medicine, on Leprosy, and Elephantiasis*—let him read Sir James Simpson's *Antiquarian Notices of Leprosy and Leper Hospitals in Scotland and England* (both published before Mr. Wilson's first edition), and *then* read over Chapter XIX.

in this book—he will at once fairly conclude that most of the antiquarian, historical, and philological information in it is taken from these two most learned authorities; each of whom, by the way, gives *his* authority for all he has written. It is a literary injury to Mr. Wilson's book that this does not clearly appear on its pages. There is, indeed, a reference to Mason Good in a note, but not as authorizing a statement in the text. He is only referred to as the author of a translation of two lines from *Lucretius De Naturâ Rerum*—which lines, we think, ought to have been given in the original. True, also, it is that there is in Chap. XIX. a reference to the researches of Sir James Simpson above referred to, but it is only a note that his account is "excellent and interesting," and may be found in a certain journal. There is no intimation that a great part of the text depends for its authority on that very "excellent and interesting" account.

As to Ireland, all about ancient and mediæval leprosy is summed up in this addition to the text of the fifth edition—"there is evidence also of its existence in Ireland." What evidence, we ask? Where is it to be found, and is it worth looking for?[a]

The truth is that this chapter is of interest only to the more learned in the medical profession; and this being so, its statements ought to be duly authenticated, *modo scholarium*. Not only ought the authorities to be named, but, where these may be MSS. or rare books, the places where they may be seen should also be noted.

There is a great improvement in the Greek department of the sixth edition. One example may suffice, and we take it from Mr. Wilson's "interpretation" of the 13th chapter of Leviticus. It is the beginning of what we advocate, viz.—giving authority for a historical or critical statement:—

| *5th edition, page* 409. | *6th edition, page* 642. |
|---|---|
| "2. When a man shall have an eruption in the skin *like* the eruption of leprosy, be it a tubercle, a scab, or a glossy spot; then he shall be brought to the priest." | "2. When a man shall have an eruption in the skin *like* the eruption of leprosy, be it a rising (saat, Heb., ουλη, LXX.), a scab (saphat, Heb., σημασια, LXX.), or a bright glossy spot (berat, Heb., λευκη, LXX.); then he shall be brought unto the priest." |

Whether this latter mode of dealing with the text originated

[a] In Dr. Belcher's edition of Neligan on the Skin (which we reviewed in February, 1866), our readers will find a good deal on the Irish aspect of this question.

with a frequent contributor of ours[a] we know not; certainly, however, mention of the Septuagint version, as illustrating or explaining the meaning of the Hebrew, now appears in Mr. Wilson's deservedly great work for the first time.

In this edition, also, we find for the first time a Dermatological Glossary of great value; and the profession have every reason to thank Mr. Wilson for it.

In the *seventh* edition, which we hope to see, Mr. Wilson will, we trust, obviate the want which we have endeavoured to point out, and thus make his *maximum opus*, *the* great book for reference and authority in all things concerning dermatology.

Of Mr. Wilson's Journal of Cutaneous Medicine we wish to write favourably. It is manifestly a step in the right direction, and will tend very much to remove a great deal of that mistiness which, to ordinary medical men, seems to hang over the entire subject of dermatology. To one *desideratum* it has a most direct tendency, viz.—to a mutual understanding as to the meaning to be attached to certain names of diseases. Among the contributors are several of those whose names have been above mentioned as themselves the authors of works on diseases of the skin. They appear to work harmoniously under the command of their chief. Their papers are well written, and the unceasing work of Mr. Wilson appears throughout. We have carefully read over the three numbers; and if we forbear to mention any particular paper as worthy of note, it is only because we should desire to do what space and time will not allow, viz.—to enumerate all, and dilate on some. We wish Mr. Wilson's youngest literary offspring all success. It seems to be clad in the "Joseph's coat" of a favourite; and, if its brethren will allow it, will doubtless hold its own among our medical periodicals.

*Hebra.*—Professor Hebra's work in an English dress is a novelty, and an agreeable one. As a translator, Dr. Hilton Fagge has done his work most creditably, and, in fact, this English edition is, in some respects, superior to the original German. The latter appeared in Virchow's "Handbuch der speciellen Pathologie und Therapie," and was not entirely Hebra's work. In this English edition, however, the entire is Hebra's work, he having re-written those parts which appeared in German as the works of others.

[a] Dr. Belcher. See his papers in this Journal in 1864, entitled, "The Hebrew, Mediæval, and Modern Leprosies Compared;" and "Remarks on the Hebrew Catalogue of Skin Diseases."

"Moreover," continues Hebra, in the English preface, "there are in the original several errors by which the meaning is perverted; all these have been corrected in the present volume. Consequently, many little changes will be found, which are to be regarded as improvements. In fact, in all these points, the English translation is more correct than the German edition of my work."

In reviewing a work of this kind we do not think that the original should be subjected to criticism, but only the new edition of that original; and this consideration raises so many familiar questions that, so far as Dr. Hilton Fagge is concerned, we think his position as editor and translator, and the value of this particular edition, may best be expressed in his own words. He thus writes in the translator's preface:—

"There will always be a difference of opinion as to the best course to be adopted in translating from one language into another: whether the expressions used in the original should be transplanted, so to speak, into the fresh soil, in the hope that they shall still flourish, or whether the object should be to convey the opinions of the author, in the words commonly employed by those who write in the language of the translation. It has been my aim to follow an intermediate course. But, although I believe my translation to be more literal than some which have been placed in the hands of the English Medical Public, I think, in looking over the pages which follow, that I am more likely to be blamed for departing from the exact mode of expression in the German text than for adhering to it too closely.

"There are, however, reasons which lead me to believe that a justification may be found for this. Every sheet of the translation has been read over by Professor Hebra, and every passage in which I felt any doubt as to the faithfulness of the translation, or as to the sense of the original, was underlined by me, and has been accepted by him, or corrected so as to convey the right meaning. It is the more necessary to make this remark as there are, at least, one or two instances in which statements are made in the original text, diametrically opposite to what was intended by the author. In these cases, the English edition, of course, differs altogether from the German.

"Again, I am convinced that a very literal translation is often really less accurate than a more free one. Words and forms of expression which are commonly used in a language are often introduced loosely and without definite meaning; whereas, when transferred to another language, they convey to the reader ideas of a precise kind which were not at all intended by the original author.

"Professor Hebra has mentioned that certain chapters have been

rewritten for the English edition of this work. These are Chapters V. and VI., "On the Affections of the Glandular Organs of the Skin," and the greater part of Chapter XV., of which Herpes is the subject. Moreover, in the chapters on Morbilli and Scarlatina, certain details as to the internal diseases which occur as complications or sequelæ of these exanthemata have been omitted. These omissions bring the volume back to a size probably nearly equivalent to that of the original, for the chapters rewritten by Professor Hebra occupy a much larger space than those which they have replaced.

"It may also be well to remark that the arrangement of the work itself differs from that adopted in the German edition. In the latter, a tabular construction is followed throughout; there are no separate chapters; and headings in small type not rarely correspond to others at intervals of more than a hundred pages. Such a plan would, I think, give an English reader great inconvenience; and, therefore, the present volume has been thrown into chapters; of which one (Chapter VII.) is made up of the isolated paragraphs above referred to, all of which are thus collected together. The tabular arrangement of the original is, however, preserved in the table of contents."

Hebra's classification will be found on page 48; and though it will appear new to many, it should be noted that it has before now been published in English. Among books in which it may be found we may refer to p. 14 of *Belcher's Edition of Neligan*, published nearly two years ago. We cannot stay to discuss the merits of this classification; and we shall only now pause to direct attention to what we consider the most remarkable part of the book—one well worth reading, and one specially marked off from other books by its elaborate treatment of the subjects treated in it. It is chapter V., on Anomalies of the Secretion of Cutaneous Glands. If any one wants to know something of Bromidrosis, Hyperidrosis, Chromidrosis, Hematidrosis, Galictidrosis, and Uridrosis, Hebra's is the book for the attainment of such knowledge.

We hope the new Sydenham Society will not disappoint the profession as to the speedy issue of the second volume of this medical classic.

*M'Call Anderson.*—Among the foremost contributors to Dermatology in these countries, Hebra specially names Dr. M'Call Anderson, of Glasgow; and having read the second edition of his book on Eczema, we gladly confess that Hebra's estimate is well founded, and we hail with pleasure an enlarged and much improved edition of his book on Eczema. The first edition was favourably

noticed in our pages, and to the second we have much pleasure in according an equally favourable notice. The first edition, published in 1863, consisted of 134 pages; the second consists of 180 pages, and is in many respects improved.

In our review of the original edition we referred particularly to the peculiar views held by Dr. M'Call Anderson as to the nature and extent of Eczema, and therefore we need not advert to them now, further than to note the fact that he holds the same views as he formerly enunciated. In the book before us those parts concerning the diagnosis, treatment, and special features of the local varieties have been markedly improved; many prescriptions have been added; and Dr. M'Call Anderson has not been ashamed to change or modify his opinion, where he thought there were sufficient grounds for doing so. We shall gladly look out for *another* book of his; and, if he will receive a friendly suggestion from us as to the subject, we may hint to him the desirability of bringing out a new edition of his work on parasitic affections of the skin.

*Squire.*—Mr. Squire's clinical lectures (illustrated) are remarkable productions in their way. The numbers before us (I.—IV.) are the first four of a cheaper and enlarged edition of his "Coloured Photographs of the Diseases of the Skin." The plates are on a reduced scale; but, notwithstanding this, they are well done; and their marked peculiarity consists in each plate being accompanied by a "clinical lecture." For example, No. IV. illustrates *Scabies;* and has attached to it two pages of letter-press, headed "Class IV.—Animal Parasite Diseases—Scabies." In this we find a concise "general description" of the disease; an outline of the treatment recommended; a history of the case illustrated by the photograph; and a note as to the special features of the photograph itself. The plate is an actual representation of a case which occurred in Mr. Squire's practice, and we have no doubt of its being a typical one in London. In Ireland, however, that interesting malady, scabies, very rarely comes before the practitioner in such glowing colours.

As to Mr. Squire's "Popular Treatise," we cannot but speak in qualified terms. There is much that is true in it, and much that is useful, were it *not* intended for popular use. Skin diseases are spoken of by their vernacular designations in England; yet treatment by arsenic is discussed; and on p. 129 we find mentioned, for the information, no doubt, of anxious nurses, these awful words, "*Microsporon* Audouini!" On page 118 an affectionate mamma

will find a horrible picture of the itch insect magnified 200 times; and she will find that this is the twelfth illustration in this "popular" treatise, the other eleven being engravings in illustration of the anatomy and physiology of the skin, nails, hair, &c. Our readers can judge from these facts as to the nature of the book. If it were intended for popular *use*, we think little more need have been said than to indicate the course to be pursued by nurses and mothers until they could get medical advice. How far this will be answered by discussing the merits of arsenic, or by showing an immense *acarus scabiei*, we leave our readers to determine.

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1. *Guy's Hospital Reports*, 3rd Series, Vol. xii.

2. *Clinical Lectures and Reports by the Medical and Surgical Staff of the London Hospital*, Vol. iii.

3. *Saint Bartholomew's Hospital Reports*, Vol. ii.

The publication of the first number of *The Dublin Hospital Reports* in the year 1817 marked the commencement of a new era in the Irish school of medicine. The political events immediately preceding this date, as well as the social changes going on, more particularly in Ireland itself, withdrew attention from original observation, and indeed checked all the mental energy of the country; but a new movement now commenced, evidenced, as has been remarked by Dr. Stokes in his Life of Graves, by a general advance in the mathematical, physical, and natural sciences, and in the studies of literature and archeology. Medicine, led on by such men as Cheyne, Graves, Marsh, and Stokes, took part in the general movement, and clinical research was the means by which it became a productive and rapidly-progressing science. *The Dublin Hospital Reports*, of which this Journal is the lineal offspring, was the means by which the new movement was stimulated, developed, and directed; and we now hail with peculiar pleasure the issue of these systematic reports, several volumes of which are before us, from the various hospitals of London. The bringing together of the valuable papers contained in these volumes cannot fail to advance our knowledge of the natural history of disease and of the powers, as well as of the limits, of our God-like art. We cannot, however, avoid giving expression to a wish that, instead of each hospital publishing a volume of reports of its own, they would all unite and

publish the results of their labours monthly or quarterly, as the necessities of the case might require, in a single volume, whereby the labours of inquirers would be lessened, and the true interests of science be promoted, while the local ambitions and jealousies of the several institutions would be kept perhaps more fully in abeyance.

*Guy's Hospital Reports.*—Of the various reports before us this is the oldest, having now reached the 12th volume of the 3rd series. In the last number of this Journal we noticed two valuable contributions to this volume On Diseases of the Nervous System, by Dr. Wilks. In addition to these there are twenty-three others, some of which we shall now introduce to our readers. The first is by Mr. J. Cooper Forster, On Hydrophobia, founded on the six cases recorded by Dr. Bright as having occurred in the decade from 1820 to 1830, and on seven that occurred subsequently; and it is worthy of remark that no case is to be found noted in the records of the hospital from 1837 till 1856—a period of nineteen years. The first question considered by Mr. Forster is, how long after the bite may hydrophobia occur? Of the thirteen cases the shortest time that elapsed was four weeks, and the longest, in one case only, five to seven years. The other eleven all took place at various periods within eleven months, showing that the poison is more tardy in its action than any other that assails the human body. It appears that when the disease manifested itself early the bite was in the most sensitive and vascular parts of the body; thus when it was on the lip four or five weeks only elapsed, on the hand five to seventeen weeks, and in one case forty-seven; and it seems probable that the longest intervals occur where the part bitten had been covered with clothes at the time of the injury. The following are Mr. Forster's conclusions on this point:—

"1. That when a bite has occurred on the face a rapid appearance of the disease may be looked for; that a few weeks, probably four or five, will elapse before evidence of it is shown, and therefore that if those few weeks pass over safely an immunity from the malady may be expected.

"2. That when the bite has taken place on the hand a still longer time, from five weeks to a year at least, must be looked forward to with much anxiety. It may be that in the single case among the ten in which a year elapsed before hydrophobia occurred there was some special reason for the delay; to this we shall advert when speaking of the treatment.

"3, and lastly. That when the clothes have been bitten through before the skin is injured some years may pass ere the disease occurs.

"Some may be disposed to think that when hydrophobia appears some years after the occurrence of a bite it can scarcely be considered to be owing to the wound then inflicted. That the case No. 4 was an undoubted specimen of the disease, none of those who saw the patient could hesitate for a moment to pronounce, but whether such a disease as spontaneous hydrophobia can occur may be another question. This appears to be the only solution of the difficulty, but it is one which we cannot adopt. That cases do occur resembling hydrophobia in several particulars, except in the termination, there is no doubt; one was mentioned in *The Times* newspaper not long ago, and vaunted as hydrophobia cured by salivation. No one who read that case could have the slightest hesitation in pronouncing it to have been hysteria. Several instances are on record of hysterical dysphagia, in which inability to swallow liquids was the marked symptom, and in the accounts of many, indeed of nearly all these cases, barking is adduced as a characteristic symptom, as if the disease must therefore be hydrophobia. In fact, however, though in well-marked cases of hydrophobia the former is a constant symptom, the latter is by no means invariably present. Dr. Bright mentions this hysterical dysphagia occurring in a woman forty years of age; the patient, of course, recovered."

The original wound did not undergo any alteration in any of the thirteen cases, except one, previous to the appearance of the hydrophobic symptoms, and consequently the author does not coincide in the opinion generally held on this subject. He believes, however, that intense pain in the course of the nerves leading from the injured part is one of the earliest and most marked symptoms of the commencement of the malady; and this, with the characteristic difficulty of swallowing he regards as sufficiently characteristic of the disease. Except the dilatation of the pharynx, of which at least one very marked example was observed, and which may be a cause or effect, no special organ claimed attention on the *post-mortem* examination. In the following extract we have a summary of the treatment, but in no case was it successful. The preparations of tobacco, so much relied on by the late Dr. O'Beirne of this city, and again brought into notice by Professor Haughton in the form of nicotine, do not seem to have been tried in any of the cases:—

"The variety of treatment adopted shows at once the utter despair of achieving any good result felt by those who have had these patients under their charge, and we do not see how anything else can be expected

unless we arrive at some more satisfactory solution of the pathology of the disease. As matters now stand, the treatment appears to be most empirical, though we doubt not that each surgeon or physician has had a reason for the plan he adopted. We can speak positively on this point in our own cases, which have been two.

"In the first of Dr. Bright's cases bleeding was adopted, though the man was fifty-two years of age:—it was the fashion, or perhaps the necessity, to bleed patients at that time:—the poor fellow lived forty-six hours.

"In the second case of Dr. Bright's nitric acid was applied to the wound by a medical man, and when the attack came on, calomel, antimony, and opium were ordered, but it appears little good was done. The patient died in thirty hours.

"In the third case of Dr. Bright's amputation of the arm above the elbow was had recourse to, and the patient lived forty-eight hours.

"In the fourth hydrocyanic acid was given; the patient lived forty-eight hours.

"In the fifth subacetate of lead was the remedy tried; the patient lived sixty-three hours.

"In the sixth and last of Dr. Bright's cases an injection of half an ounce of rectified ether was administered and repeated two or three times, with opium. The man lasted seven days.

"In the first case mentioned in this paper it appears that nothing was done; at least, no particular remedy was tried, and the patient lived three days.

"In the second case cajeput oil was used.

"In the third case, Dr. Addison, under whose care the patient was, appears to have given free purging a good trial, with the result common to all the cases—death. This occurred in forty-eight hours.

"In the fourth case mentioned by Dr. Habershon, cannabis indica was used as an injection, and chloroform was afterwards administered.

"In the fifth case, which occurred but four weeks after the bite, excision of the injured part had been performed immediately, and injections of quinine were tried; the boy lived seventy-two hours.

"In the sixth and seventh cases two of the alkaloids were summoned to our assistance, with the like result in both cases; in the former case, however, the patient lived six days, in the latter only forty hours.

"In the sixth case atropia was used, as we have seen. We were anxious to try the full effects of this drug, which Pereira has classed amongst the phrenics and anesthetics, as being one of the most powerful of those medicines which have an especial influence over the cerebro-spinal system. Upon referring to the report it will be seen that a portion under the quarter of a grain was injected in twenty-eight hours, and there is no doubt that, after eleven hours of its use, the patient being

fully under the influence of the drug, a marked quiescent condition appeared; the hydrophobic symptoms seemed to abate. Thus, he swallowed some tea with a little effort, and afterwards some beef-tea, although he had taken no fluids for five days before. The delirium from which he suffered before the atropia was given disappeared. The spitting about the room in which he indulged was more confirmed after the atropia than before.

"After the injection of the 1-36th of a grain, at 2 p.m., December 7th, he rapidly sank, whether from the effects of the atropia or the hydrophobia, or whether from both combined, it would be difficult to say.

"In the seventh and last case nitrate of silver and perchloride of iron had been applied pretty freely after the bite, so much so as to cause considerable suppuration in the hand, and to render the patient seriously ill for nearly six weeks. Hence, if the poison could be eliminated by these means, this was a fair opportunity for such a result. The delayed appearance of the symptoms may possibly have had some connexion with the previous treatment.

"Upon reviewing these cases, the results, and the treatment, can we indorse the remark in Cooper's 'Surgical Dictionary?'—that 'happily surgery possesses one tolerably certain means of preventing hydrophobia when it is practised in time and in a complete manner. Every reader will know that the excision of the bitten parts is the operation to which I allude.'

"Dr. Watson says, 'The early and complete excision of the bitten part is the only measure in which we can put any confidence.'

"In the only case we have reported where excision was practised the disease appeared in four weeks. The bite occurred at a part where complete removal was easily practised without involving any serious complication, and yet it failed; and we believe it is much more likely to fail when practised in other parts of the body, where complete removal cannot be so easily performed. In reality, the only sure method of employing excision appears to us to be to amputate the member at a part between the bite and the body, and that immediately after the infliction of the injury. We should carry out the practice thoroughly, or not at all. We quite agree with Abernethy, and adopt the practice consistent with his opinion, that a patient bitten by a dog, whether mad or otherwise, should be treated on general principles applicable to all injuries. If he be about to have hydrophobia, nothing, so far as we know at present, can prevent it; and we believe that we shall not be able to achieve such a result, until we are better acquainted with the pathology of the disease. Excision or non-excision is alike in vain; sooner or later the disease appears.

"The practice adopted at Guy's Hospital in the treatment of bites,

whether by dogs, horses, men, or women, donkeys, cats, rats, or foxes, varies according to the fancy of the dresser. During the last six months all have had nitrate of silver freely applied. Formerly nothing was done beyond treatment on general principles, except that in some months the house-surgeon or dresser applied strong nitric acid to the wounds. The nitrate of silver, however, as adopted by Youatt in his own person, has found the greatest favour."

Dr. Salter treats of "The Teeth as Passive Organs of Speech" in the second paper; and Drs. Fagge and Stevenson of "The Application of Physiological Tests for Certain Organic Poisons, and especially Digitaline;" and then we have the papers by Dr. Wilks, already referred to. The sixth, by Mr. Cock, is entitled, "A few Words on the Means to be Adopted for Establishing a Communication between the Bladder and the Exterior of the Body, when the Urethra has become Impermeable. The last Resource Available in Certain Cases." This paper opens with the following passage, in which Mr. Cock shows that he has no fancy for some of the methods recently proposed for treating stricture:—

"In this short communication I have no intention of alluding to the treatment of ordinary stricture; nor shall I yield to the temptation of criticising the various methods and appliances which, within the last few years, have been either invented or resuscitated for the purpose of restoring a narrowed urethra to its normal condition. Some ingenious mechanical contrivances cut, some tear, some burst, some are supposed to dilate with marvellous rapidity. My objection to their use is founded on a forty years' experience, which has taught me that such cutting, tearing, bursting, or rapid dilatation is often exeedingly mischievous in its effects, and fails in establishing a permanent cure, and that the object in view may be accomplished by much milder, surer, and safer means."

The object of the paper is to recommend tapping the urethra where it emerges from the prostate, in cases where it is impossible to either pass a catheter or tap through the rectum; and the following directions are given for performing the operation:—

"The only instruments required are, a *broad* double-edged knife, with a very sharp point; a large silver probe-pointed director, with a handle; and a canula, or a female catheter modified so that it can be retained in the bladder.

"The patient is to be placed in the usual position for lithotomy; and it is of the utmost importance that the body and pelvis should be

straight, so that the median line may be accurately preserved. The left forefinger of the operator is then introduced into the rectum, the bearings of the prostate are carefully examined and ascertained, and the tip of the finger is lodged at the apex of the gland. The knife is then plunged steadily but boldly into the median line of the perineum, and carried on in a direction towards the tip of the left forefinger, which lies in the rectum. At the same time, by an upward and downward movement, the vertical incision may be carried in the median line to any extent that is considered desirable. The lower extremity of the wound should come to within about half an inch of the anus.

"The knife should never be withdrawn in its progress towards the apex of the prostate; but its onward course must be steadily maintained, until its point can be felt in close proximity to the tip of the left forefinger. When the operator has fully assured himself as to the relative positions of his finger, the apex of the prostate, and the point of his knife, the latter is to be advanced with a motion somewhat obliquely either to the right or the left, and it can hardly fail to pierce the urethra. If, in this step of the operation, the anterior extremity of the prostate should be somewhat incised, it is a matter of no consequence.

"In this operation it is of the utmost importance that the knife be not removed from the wound, and that no deviation be made from its original direction, until the object is accomplished. If the knife be prematurely removed, it will probably when reinserted make a fresh incision, and complicate the desired result. It will be seen that the wound, when completed, represents a triangle; the base being the external vertical incision through the perineum, while the apex, and consequently the point of the knife, impinges on the apex of the prostate. This shape of the wound facilitates the next step of the operation.

"The knife is now withdrawn, but the left forefinger is still retained in the rectum. The probe-pointed director is carried through the wound, and, guided by the left forefinger, enters the urethra, and is passed into the bladder. The finger is now withdrawn from the rectum; the left hand grasps the director, and along the groove of this instrument the canula is slid until it enters the bladder.

"The operation is now complete, and it only remains to secure the canula in its place with four pieces of tape, which are fastened to a girth round the loins. There will probably be no escape of urine until the stilette is removed from the catheter.

"A direct communication with the bladder has now been obtained, and the relief to the patient will be immediate. Unless the kidneys have become irremediably disorganized, we may confidently anticipate a favourable result; and the restoration of the urinary organs will be more or less complete, in proportion as the obstructed portion of the urethra is more or less amenable to the ordinary judicious treatment of

stricture. The canula may generally be retained in the bladder for a few days, and if the state of the urine renders ablution necessary, the viscus may be frequently washed out. The canula may then be removed, cleaned, and reintroduced. A flexible catheter is sometimes more desirable and congenial to the feelings of the patient than a metallic canula.

"If the previous destruction has not been very great, and if the case progresses favourably, the swelling of the perineum and scrotum gradually subsides, the induration disappears, and the urinary sinuses become obliterated. The urethra may then be examined in the ordinary way, to test its permeability, and one may be agreeably surprised to find that the sound or catheter readily passes through the former stricture, until it strikes against the canula. An attempt may then be made to introduce a flexible catheter into the bladder, and its passage may, if necessary, be facilitated by passing a director through the perineum into the bladder, and guiding the catheter along its groove. The urethra once restored to its normal condition and calibre, the artificial opening through the perineum soon heals up, and, barring the liability of stricture to return if not attended to, the cure may be said to be complete.

"We must not, however, always expect so favourable a result. I have operated in several cases where the obstruction of the canal was complete, and its impermeability permanent.

"In such cases the patient is condemned to pass his water through the artificial opening in the perineum, unless a new passage should be bored to unite the upper and lower portions of the patent urethra—an operation which I have seldom or never known to be successful.

"The necessity of micturating through the perineum may seem to be a considerable hardship, but, with a little arrangement, the inconvenience is not very great; and be it remembered, that the man's micturition is merely assimilated to that of the other sex.

"To keep the artificial passage in a permeable state, it is generally necessary to pass a flexible bougie through the opening occasionally, and to retain it *in situ* for a few hours. The patient very soon learns to do this for himself.

"A few years ago there were at least half a dozen men on whom I had operated, and who were happy and comfortable, passing their water through the perineum. I have now under my frequent observation two men, on one of whom I operated twenty-five years ago, on the other twenty years ago, and both of whom are thankful for their condition.

"I have not found that this operation, with its result in a permanent factitious urethra, at all interferes with the sexual function, although it is of course a complete bar to procreation. One of the individuals alluded to above has, I am sorry to say, taken a somewhat unfair

advantage of his immunity from ordinary liabilities, by promiscuous and vicarious indulgence of his passions, and is well known as a gay Lothario and modern Don Juan among the fairer sex."

The next paper is by Dr. Pavy, on a case of "Vitiligoidea Plana et Tuberosa," the peculiar affection of the skin, first described by Drs. Addison and Gull; and the following one is by Mr. Towne, on "The Physiology of Binocular Vision," both of which are illustrated by plates; and then we have a very excellent essay by Dr. Habershon, on "The Treatment of the Diseases of the Heart," but not containing anything to require notice here; and the same remark applies to the paper that follows, in which Dr. Taylor records "twelve cases of poisoning, apparently from the use of copper for culinary purposes, in one of which death occurred, either from poison or disease, after nineteen days' illness;" and after an examination of all the circumstances Dr. Taylor concludes that the death was the result of natural causes. The paper is an admirable model of the method by which such cases should be investigated.

Dr. Salter contributes the next paper, in which he describes "two cases in which a very rare form of papillary tumour grew on the gum;" and Dr. J. Braxton Hicks contributes a most important and valuable paper "On Amputation of the Cervix Uteri, and other Methods of Local Treatment in Cases of Malignant Disease of the Uterus and Vagina." Dr. Hicks thinks the advantages to be derived from local treatment have not generally received as much attention as they deserve, and he gives the following statement of the objects to be attained in the treatment of malignant disease of the uterus and vagina:—

"We endeavour—1st. To eradicate or retard the disease.

"2. To check the excessive watery and bloody discharges which drain the patient.

"3. To destroy their offensive nature.

"4. To stop the violent bleeding.

"5. To remove the chloranæmia.

"6. To remove local pressure caused by some of the growths.

"7. To mitigate the pain.

"These are the points we desire to attain, and to a certain extent we are able to compass them all with the exception of the first, namely, the complete eradication of the disease. And if we, not too sanguine as to the total extinction of it, are content to do all that we can to arrest its

progress and remove its worst features, then I believe we are able to do much towards prolonging the life and promoting the comfort of our patient. And here I may remark that the following observations are based upon the results of cases treated in Guy's Hospital, a short report of which will be found at the end of these remarks, the details of which it is scarcely needful to add.

"With regard to the extinction of the disease, my experience has not been very favourable. I have seen only two cases in which such a result may be considered to have been even approximately attained. In one of these the patient lived three years and a quarter after the removal of a very large epithelioma of the cervix; in the other case, the last time I heard of her, the patient was alive four years after the operation. In these cases the diseased parts were very completely removed, and in each instance before the cervix was very much involved. Generally, however, these patients do not apply until the disease is fully established, and consequently not early enough to secure the full benefits likely to be derived from removal. Malignant disease in the uterus, as in other parts, assumes a variety of forms; and as our plan of treatment much depends upon the particular form of the disease, it will apparently be the most practical method of dealing with the subject if we describe the forms separately; and after each, the mode of treatment which appears most suitable. But there is one form in which in particular we can hope for but little advantage from treatment, especially in the early stages. This is the diffuse infiltrating form, which, invading more particularly the connective tissue at the onset, surrounds the vagina, rectum, &c., embracing the canals, but not projecting into them until a later stage. This does not break up so early as other forms, and the bleedings therefore do not occur before a very advanced period has been reached, and generally not until the disease has produced by pressure serious interference with the functions of the pelvic organs."

Dr. Hicks briefly describes the forms of the disease most amenable to treatment, and places first in the list the several varieties of epithelioma. These differ as to the relative amount of superficial and deep structures involved. Where the disease has extended to the deeper tissues of the cervix the effect of treatment, as regards the extinction of the disease, is less distinct, and it is only in the earlier stages that any hope can be entertained of obtaining a radical cure; but even in such cases there can be no great expectations of such a result. A valuable help, however, Dr. Hicks believes, is certainly obtained by the removal of the diseased parts, for we certainly do for a time remove all the secondary effects of the disease, and retard it so much that it has to begin again. Meanwhile

the system improves, the powers rally, and for a time the patient resumes, in many instances, a state of apparent health. In twenty-eight cases, of which he has records, every one of the patients made a marked improvement at once; this lasted for many months, in some instances for years, before they returned to their former state; sometimes the disease never re-appeared in the vagina or cervix; and though the patient may die of it elsewhere, her comfort is much increased. We shall allow Dr. Hicks himself to speak as to the best mode of operating:—

"So far as my own experience goes, I cannot say I have seen any satisfactory effects from the use of the more powerful caustics, particularly when the disease extends deeply. The disease frequently grows more rapidly than we can with safety apply them; they are tedious and painful in their action (I mean comparatively), and require great care in their application; besides, it is impossible accurately to define the extent to which they shall act. I have therefore discarded them for the purpose of the complete removal of the cervix.

"But in the use of mechanical means we have a much more prompt, decisive, and efficient plan, and by the employment of chloroform one of the great objections to its adoption, namely, the pain, is taken away. There are four modes by which it can be accomplished.

"The first is to draw down the uterus by vulsellum forceps or such like instruments, and cut the cervix off with the knife or scissors.

"The second is to employ the écraseur after drawing the cervix down.

"The third is to leave the uterus *in situ*, and remove the cervix by a chain écraseur.

"The fourth is to leave the uterus *in situ*, and remove the os by a curved chain, or by the wire-rope écraseur, or by a curved écraseur with a single stout wire.

"There is to my mind much objection to dragging down the uterus in this disease, because, on the one hand, there may be infiltrations of it above, which might be injured by the traction; and also because the forceps are apt to give way through the soft growths, and thus the uterus may retract during the operation, though this has been counteracted by passing a wire right through the cervix, whereby to hold it. But the principal objection is, that when the uterus is pulled down so low the anterior and posterior pouches of peritoneum and even the bladder may also be so far pulled down as to be exposed to risk. This has occurred, and I have seen it. It is surprising how exceedingly low down the posterior pouch is situated in some cases. The only safe way is to push the uterus up as high as possible, and then gauge the length of the portion projecting into the vagina; no greater length can be safely amputated.

"The objection to both knife and scissors, though of less force as regards the latter, if blunt, is that profuse hemorrhage may come on any time within a few days, as well as at the time of operation, which, besides being annoying and embarrassing to the operator, increases the already depressed condition of the patient. This objection does not apply to the employment of the écraseur, which should, if possible, be applied to the organ in its normal position. This is difficult to accomplish by the ordinary chain, which, having no flexibility in the lateral direction, cannot be applied round the cervix so as to give a transverse section. The endeavour has been made to overcome this disadvantage by curving the end of the instrument. This modification, although it is in some degree useful, is not convenient of application in consequence of its general rigidity; nevertheless, it is, perhaps, the most powerful instrument of the kind, particularly that form of it which has the click-clack movement.

"The most adaptable écraseur I have used is the one I have already described elsewhere (Vol. vii., p. 252). The only point to which it is especially necessary to look is to have a very strong rope for this work; one with seventy wires will, I believe, be strong enough for any cervix. A loose noose can readily be passed round the neck and tightened by the hand in any position required. The wire-rope will bend at any angle to the shaft of the instrument, which should be passed up in front of the cervix.

"I have never seen any bleeding from the use of this or of the chain écraseur except in one case, in which the operation was done a few weeks after labour; however, in this case the hemorrhage was not at all out of control.

"Now some have regarded this operation with a certain degree of dread. That fatal cases may arise is possible, but that they are rare I think is the fact.

"In all the cases in which I myself have operated, or at which I have been present, amounting to more than twenty-eight, I have never seen any fatal result nor any untoward symptom whatever.

"In some the line of division was through healthy, in some through affected tissues, but with the same result.

"I am therefore inclined to think that the amputation of the cervix is a less dangerous operation than some have supposed, at any rate, in connexion with our treatment of this disease.

"To show how little irritation ensues from amputation, I may mention that I removed a very large cauliflower excrescence from a woman pregnant four months without inducing uterine action or any symptom whatever, and without hemorrhage.

"There is, perhaps, one slight disadvantage in the use of the écraseur, which is that the compression of the tissues does not always subside, and that the canal of the cervix remains somewhat occluded, causing

dysmenorrhea. This can readily be removed by dilatation after recovery, but it is only occasionally that it occurs, and it can only be important in those who have not passed the menstrual epoch. . . .

"To sum up in a few words, I would recommend in all those cases in which the mass is large, and more or less of a mushroom shape, that the cervix should be removed, if possible, *in situ*, and by an écraseur adapted for that purpose. The results are—marked improvement in the patient's health; removal of the fetid and bloody discharges, and of their effects on the system; a retardation of the disease for a considerable time; and this without much danger as far as the cases to be reported show."

The next form is the encephaloid having a broad base, and filling up the vagina more or less completely. This mass may be broken up by the finger, but if the wire-rope can be passed round it is better to do so and remove the whole, and then apply a powerful styptic; and in cases of epithelioma, even in an early stage, if the cervix be too short to allow of amputation, the use of styptics is recommended. For this purpose tr. ferri muriatis is suggested, or more particularly the anhydrous sulphate of zinc. We have ourselves been in the habit of using nitric acid very freely in such cases, and the solid perchloride of iron, and have seen very great benefit from their use. We have also used these preparations with advantage in the next form Dr. Hicks describes, viz., where the disease is much advanced, and with outgrowths of one part we have excavation of another, the fetor of the discharges being excessive. Here Dr. Hicks uses tr. ferri muriatis slightly diluted, or a concentrated solution of alum with tannic acid almost to the consistence of paste, or the dried sulphate of zinc made into a paste with glycerine. Carbolic acid, he thinks, might be employed, but he has no experience of it, and where there are vascular outgrowths of a polypoid form he removes them by torsion or the écraseur. The paper concludes with the narrative of fifteen cases in which amputation of the cervix was performed. The next paper is "On a Case of Intermittent Hæmatinuria, by Dr. W. W. Gull;" and then Mr. Birkett continues his "Contributions to the Practical Surgery of New Growths or Tumours," this series (V.) being devoted to Cartilaginous and Bony Growths; and Dr. Habershon details a "Case of Abdominal Tumour, in which Cancerous Disease of both Supra-renal Capsules simulated Disease of the Spleen and Lumbar Glands."

Acute Rheumatism is the subject of four papers—in the first, Dr. Stevenson gives the results of his investigations as to the

condition of the urine in this disease, from which he draws the following conclusions:—

"1. In acute rheumatism, when the excretion of solid materials in the urine is large, the patient makes, other things being equal, a rapid recovery; on the other hand, in lingering cases the excretion of solids is usually small.

"2. As in this disease the urine is invariably scanty in bulk, but (generally from this cause only) of high density, a useful guide to the progress of the case may propably be found by diluting the urine to the normal bulk, and then ascertaining its specific gravity. According as it is now of high or of low density will the progress of the disease probably be favourable or unfavourable.

"3. Though the excretion of urea is usually greater during the height of the disease than during convalescence, this is not invariably the case; the reverse sometimes occurs. Though the excretion of urea is greater during the disease than during the early stage of recovery, the urea in the former stage seldom very much exceeds in amount the normal physiological excretion.

"5. The uric acid is always much increased whilst the disease continues.

"5. The phosphoric acid is generally in greater amount during the progress of the disease than during recovery, but the quantity of this substance rarely much exceeds the quantity secreted in health.

"6. The secretion of sulphuric acid is generally increased, and often largely. In one instance more was excreted during recovery than during the acute stage of the disease. The amount of this substance excreted is very variable."

Dr. G. Owen Rees describes cases of acute rheumatism treated with lemon juice, the average duration of which, when not complicated, was 6·8 days; and while he believes that complications are not very common after patients have been bedded and well cared for, whatever may be the plan of treatment adopted, he asserts that when complications are present he knows no internal remedy that assists the patient so well as the free use of the juice. Dr. Barlow introduces his cases with the following remarks:—

"There are few practical questions upon which, as it appears to me, there has been greater diversity of opinion amongst medical men than that of the treatment of acute rheumatism. I do not at present allude so much to the now obsolete practice of indiscriminate bleeding and calomel, as to the later modes of treatment by chemical action, by elimination, and by merely expectant treatment. I am not prepared to say whether

chemical remedies produce their effect by the decomposition or neutralization of the peculiar acid present in the blood in rheumatism, but it is nevertheless true that the most successful of these, the lemon-juice, contains a salt of potass, which may be an eliminant, and that citric acid in its uncombined state has not the same efficiency. The occasional success of the expectant treatment, or the giving no active medicine whatever, has been regarded by some as a proof of the inutility of all the other modes of treatment, and by some as an argument against the use of drugs in the treatment of disease in general. What, however, I would urge is that no one of these modes of treatment is most applicable to all cases, and that the success of the expectant treatment only shows that rheumatic fever, like all acute disease, is capable of spontaneous recovery; and that where this recovery is proceeding steadily and safely the officious use of drugs is to be avoided, and that the skill of the experienced practitioner never appears to greater advantage than in the discrimination of the cases which do not require his interference; but that, on the other hand, many cases will not proceed thus favourably if left to themselves, and in such instances there is occasion for the use, not of a specific remedy, for as yet we know of none such for rheumatism, but of medicines adapted to the exigencies of the particular case."

Dr. Sutton gives a "Second Report on the Cases of Acute Rheumatism treated in the wards of Guy's Hospital, with Remarks on the Natural History of the Disease." In the last number he reported several cases treated, for the most part, by mint water alone, and he now says that his subsequent experience has tended to confirm what he had already stated. The following extracts will show the conclusions drawn from the cases now recorded:—

"It may here be noticed that all the above cases were treated, for the most part, with mint water only. When the patient was suffering very much pain a grain or half a grain of opium was ordered at bed-time, or twice a day, and when the bowels were confined a Seidlitz powder, with a dose of castor oil, was prescribed.

"The average duration of those cases which were not accompanied with marked heart disease was nine days, and of those with heart affection of no great severity about eleven days. In the case attended with severe pericarditis and pleuritic effusion the duration was thirty-two days.

"It will probably be admitted that the above record affords evidence to prove that a certain number of cases of rheumatic fever go on to recovery, and terminate in convalescence within from ten to twenty days. They also show that a patient may have extreme rheumatic pericarditis, and at the same time considerable pleuritic effusion on the left side, and

yet that he may progress very satisfactorily, although no drugs be given, with the exception of a small dose of opium once or twice a day, this being prescribed with the object of relieving pain and quieting the nervous system, rather than of exercising any special influence over the inflammation of the serous membranes. The same thing may be said of endocarditis. These cases, moreover, prove that well-marked and even severe rheumatic inflammation of the heart may entirely subside and leave the heart apparently healthy, and this with little or no assistance from drugs.

"In all the cases above recorded the symptoms were well marked and acute. Several of the joints were affected. There was pain in the joints, and also redness and some swelling. The pain was often very acute, the patient lying on his or her back, quite helpless, and unable to move. The tongue was thickly coated with yellow fur. The skin was perspiring freely, and in some cases profusely, and the rheumatic odour was well marked. The pulse was full, and the face flushed. The urine was high coloured, the quantity passed in twenty-four hours was diminished, and the specific gravity was increased, ranging from 1025 to 1032.

"Cases belonging to this class tend to do well without the aid of any drugs; the patients simply require absolute rest in bed and a milk diet, and the symptoms usually subside in eight or ten days when unaccompanied by any heart disease. But, in order that they may do well and recover speedily, it appears to be absolutely necessary that the patients should rest in bed, that they should not be allowed to get out of bed for any purpose, and that the diet should be limited to light nutritious food.

"It is interesting to notice how rapidly, even suddenly, the symptoms subside in such cases. Of this we have an example in the case of David D——, who had great pain in several of his joints, and was unable to move in bed. On the tenth day, about 6 a.m., the pain, as he stated, suddenly left him, and when we saw him next morning he was suffering much less, and was able to move all his limbs.

"It is in cases of this kind that the remedies recommended by various physicians have appeared to be of so great service.

"There is also another class of cases which tend to do well, but in which the duration of the attack is much greater. We refer to cases attended with the following symptoms:—There is more or less pain in the joints; the skin is cool, and not generally perspiring, except during sleep; the tongue is slightly furred; the appetite is often good. The pulse is not full. The urine is often of a natural colour, and very soon becomes alkaline; its specific gravity is not at all, or very little, higher than normal. In these cases, nevertheless, there are often physical signs showing that the heart is affected with rheumatic inflammation.

"There is a third class of cases in which the power of recovering is

feeble, and which therefore require the aid of medicine. We refer to patients who have had rheumatic fever, and whose hearts are diseased in consequence. In such cases, as is well known, the rheumatic attack often recurs. If the heart has been very much damaged the joint symptoms are often slight and the chest symptoms severe. Cases are seen in which the inflammation in the joints is so little that it is difficult and even impossible to decide whether the changes in the heart are due to rheumatic fever. There are two things, however, that usually assist us in arriving at a conclusion. The dyspnœa has markedly increased, and often comes on in the course of a short space of time, that is, in two or three weeks. There is a history of a previous attack of rheumatic fever, and on inquiry we learn that there is pain, though it may be but little, in one or two joints. Experience has shown that such cases run a rapid course, and not infrequently terminate fatally.

"In other cases, as is well known, the *post-mortem* examination often shows some recent pericarditis or endocarditis which has supervened upon old disease of the heart.

"For such cases as these the expectant plan of treatment is totally inadequate; they do not progress satisfactorily when treated by rest and light nutritious diet only; they require the assistance of some drug.

"We have briefly recorded the last case not only because it is a good illustration of a certain form of rheumatic fever, but also to show the condition of the heart.

"In the last number of the 'Reports' we endeavoured to point out that it is often very difficult and even impossible to say whether the heart has or has not been materially injured during rheumatic fever. At the time we referred to a case which had occurred in Guy's Hospital. The patient died of heart disease, apparently the result of rheumatic fever, and the *post-mortem* examination showed that the pericardium and endocardium were healthy, but the muscular tissue of the heart was diseased. The case was similar to the one which we have just mentioned. In both these cases the pericardium and endocardium were healthy, and showed no signs of former disease. For the left ventricle to become so dilated would necessarily require time. Hence we are led to infer that there would have been no bruit during the rheumatic attack to indicate that the part was injured, unless we assume that there had been some endocarditis or pericarditis, all traces of which had disappeared, but this would be simply an assumption.

"The urine during the acute stage was generally high coloured, diminished in quantity, and of increased specific gravity. In some cases there was a copious deposit of lithates when the urine cooled, but this was by no means constant. When the symptoms were acute the urine was acid. In the subacute cases the urine was occasionally noticed to be neutral, and sometimes alkaline. With respect to the alkalinity of the

urine, we would observe that it is not so often that it is alkaline when passed as that it becomes so in an hour or two. We have several times seen the urine become alkaline in this way after it had been voided. When the symptoms are acute the urine has been noticed to remain acid for many hours, and even three days after it had been voided, thus strikingly differing from the urine passed in the subacute cases, which, as we have already stated, becomes alkaline quickly after being voided. It may have been noticed that in the sthenic cases the urine is, during the acute stage, usually of high specific gravity, and that it continues so while the acute symptoms last. As, however, the pain in the joints, heat of skin, coated tongue disappear, the urine falls in specific gravity, and, by degrees, as the patient recovers, falls lower and lower until a very low point is reached (in one case as low as 1005), and then it rises again to its normal specific gravity.

"A question may be asked—Does the urine always become alkalized as the attack subsides? That it often does, it would be difficult to dispute, but it certainly does not always. In some of the cases that have done very well, we might almost say, the best of any, the urine did not become alkaline; but day by day it remained acid."

The remaining papers in this volume are, one on Excision of the Spleen, by Mr. Bryant; one on the Spontaneous Cure of Aneurism of the Aorta, by Dr. Moxon; Cases connected with Obstetric Jurisprudence, by Dr. Braxton Hicks; one on Operations on the Larynx, by Mr. Durham, in which two cases are recorded where the larynx was laid open by an incision through the thyroid and cricoid cartilage, with successful results. Mr. Bader contributes a paper on Diseases of the Retina, with Remarks on its Structure and Normal Conditions; and the volume closes with Clinical Remarks, by Mr. Hinton, on Perforations and some other Morbid Conditions of the Membrana Tympani.

II. *Clinical Lectures and Reports by the Medical and Surgical Staff of the London Hospital. Vol.* III.—This series was commenced in 1864, and has now reached the third volume. As its name implies, it is a record of the clinical instruction given to the pupils attending the hospital, rather than of elaborate essays or "*studies*," and fortunate are the pupils whose lot has fallen on times when they can obtain such instruction. It will not, however, be necessary for us to analyse all these lectures. We will instead use the space at our disposal for noticing some of the more important points touched upon. There is one feature, however, in these

volumes that we must first express our pleasure at seeing, viz., a series of reports of cases drawn up by students themselves. It appears that medals are given to those students who not only show the greatest proficiency, but who have worked best in the hospital wards, and these admirably reported cases have been selected from among those sent in by the different candidates for the prizes. Very fully do they prove the good effects of the system.

Mr. Adams contributes a case of femoral aneurism, in which he ligatured the external iliac artery. The aneurism extended upwards under Poupart's ligament. The ligature was applied on 17th November, came away on the 16th December, and the woman left the hospital at her own request on the 10th January, the wound being "almost closed." Pulsation in the tumour never returned as long as she was in the hospital; but after she left the tumour began to be painful, and soft fluctuation could be distinguished, and she died after two or three attacks of arterial hemorrhage, which appeared to come from the lower part of the artery. No examination of the body was obtained.

The next paper is a very full exposition of the principles of spectrum analysis, by Dr. Letheby, and then we have a lecture on diabetes by Dr. Fraser. Mr. Hutchinson next contributes a lecture on Herpes Zoster, in which he invests that common and rather trivial affection with great interest. He adopts Professor Barensprung's views as to the nature of the disease, that it is an instance of inflammation of the skin, produced directly by nervous influence, a symptom displayed by the skin of disturbance beginning at some part of a nerve-trunk, or possibly in the very centres themselves; and while Mr. Hutchinson believes it is not an exanthem, he shows it is not simply a neurosis; for, if it were, why should it not relapse—why should it have stages, and how could it protect the individual from a second attack? He suspects that it belongs to neither of these classes; but that it constitutes a new group by itself, and that whoever will succeed in unravelling the mystery that at present surrounds it, must at the same time make a discovery in physiology. The leading features of the disease on which these propositions are founded are discussed *seriatim* by Mr. Hutchinson, and he shows—

"That herpes zoster may occur at almost any age, and if we except early infancy, is equally frequent at all periods of life. . . .

"That the two sexes are equally liable to its attacks. . . .

"That it is not possible to denote any special condition of general health which predisposes to its attacks. . . .

"Herpes zoster is not contagious. . . .

"As a general rule herpes zoster does not occur twice in the same individual.

"I have myself only one instance in which a patient suffered twice from it. A very few others are on record. In all such the interval between the two attacks has been very long (from 20 to 30 years). Probably these instances of second attacks are not more frequent relatively to the actual frequency of the several diseases, than are second attacks of any of the exanthems, and they appear to occur under precisely similar circumstances, *i.e.*, with long intervals. In my own case (see Case VI., p. 82) there are two exceptional features, the occurrence twice and the asserted symmetry of the disease in the first attack. Whether it is probable that the diagnosis in the first instance, was incorrect or not, I must leave in some doubt.

"In true herpes zoster the eruption is (with the very rarest exceptions) never symmetrical.

"I have seen but one case in which the eruption occurred on both sides. In one other case which came under my observation, in a man, the rash was on the right side of his chest, and at the same time on the left frontal region. Several writers on skin-diseases, assert that they have met with symmetrical herpes. There is a rare form of syphilitic rash, so closely similar in all its features to the true zoster, that it is very possible that mistakes may have occurred.

"Of this remarkable affection, hitherto undescribed, and which I may call 'Syphilitic shingles,' I have seen three or four examples. In the last I was able to bring the patient before you. The points of diagnosis are, that the syphilitic form is always symmetrical, seldom limited to the chest, and does not disappear nearly so quickly as the true shingles. . . .

"Herpes zoster occurs with equal frequency on the two sides. . . .

"That herpes zoster generally observes closely the recognized anatomical distribution of some nerve. . . .

"That the nerve affected is usually a cutaneous one, but that this is not invariably nor exclusively the fact. . . .

"The chief phenomenon of shingles is the development of a crop of vesicles on the skin, denoting an inflammatory disturbance of nutrition in the part of skin affected. That this disturbance of nutrition may take place in other and deeper structures, is rendered probable by the circumstances that not very unfrequently its subjects complain much of severe deep-seated pain; muscular stitches in the side are not uncommon; in some cases, especially on the forehead, the amount of swelling is such as to prove that the subcutaneous cellular tissue is extensively affected. I

have, however, in addition to these facts as presumptive evidence, the great good fortune of being able to produce some positive facts. The eye (so invaluable to observers of the inflammatory process on account of the transparency of part of its covering) is again the organ which supplies me with the positive evidence referred to. In the case of a man who came under my care at the Ophthalmic Hospital on account of herpes frontalis, there appeared reason to believe that the whole ophthalmic division of the fifth nerve was implicated, and the nutrition of the eye itself suffered disturbance. This case is so important that I shall read it in detail. (See Case I., p. 76).

"This case was the first in which I witnessed undoubted iritis, and, I believe, the first on record. Since then I have seen three or four others, and feel no hesitation in asserting that the inflammation of the iris stands in precisely the same relation to the nerve disturbance as does the eruption in the skin. Usually the cornea becomes extensively ulcerated (superficially) at the same time as the iritis occurs, but in one instance we had had iritis whilst the cornea remained quite clear. The iris in these cases will not respond to the influence of atropine. In severe cases the eye is usually much damaged.

"That there is no reason for supposing that herpes zoster can be produced by artificial irritation of nerve-trunks. . . .

"Can unilateral herpes be produced by internal medication?

"I have repeatedly seen herpes zoster occur in patients, whom I had been treating for other skin-affections by means of arsenic. This has happened so frequently, that I have been inclined to suspect that it was more than a coincidence.

"That the disease runs a definite course. . . .

"Certain other very important questions arise in the investigation of this disease.

"Why are the dorsal nerves, and especially the third or fourth dorsal, so much more frequently affected than any others?

"Why does the eruption so frequently occur in manifest connexion with the distribution of certain branches of the first division of the fifth nerve, whilst we have so few instances in which the second or third divisions of the same nerve are similarly affected?

"Why are the forearms and the legs so rarely affected?

"Does the nerve-irritation, which every one will admit constitutes at any rate one stage in the disease, begin centrally, or at some part of the nerve-trunk external to the centres?

"What share has the vaso-motor nerve in the production of the symptoms?

"In concluding this lecture, I must beg you to pardon its fragmentary and inconclusive character. I have brought forward only doubts and difficulties. My end is gained, however, if I have succeeded in con-

vincing any that there is a special mystery enveloping the origin of this disease; that its clinical study offers an almost unworked, and very hopeful field for scientific investigation; and that whoever shall succeed in finding the right clue as to the mode of production of herpes zoster, will, in all probability, make, at the same time, a valuable discovery in physiology."

The paper concludes with a tabular analysis of 63 cases of Herpes Zoster, and 14 of Herpes Frontalis.

Dr. Brown and Dr. Fraser each record a case of poisoning from the external use of belladonna—in the first case in the form of a liniment, containing two drachms of the liquor belladonnæ in two ounces of soap-liniment; and in the other of a lotion, containing half a drachm of the extract in an ounce of water. In both cases there was dilatation of the pupils, with indistinctness of vision and mental disturbance. This latter was so great in the first case that the patient, a nobleman, staying at an hotel, was on the point of being removed to an asylum, when his own medical attendant fortunately visited him, and discovered the true interpretation of the symptoms.

Two cases of acute suppuration of the knee-joint, in which recovery with free motion ensued, are recorded by Mr. Carter. In the first case, the joint of a healthy man, a miner, was injured by a blow, and injudiciously treated, till suppuration ensued. A free incision was now made, and the limb put up with a rigid splint on the back, and a starch bandage. The second case was in a young woman, who had been seduced, and left her home in consequence, and obtained a scanty subsistence by needlework. A few days after giving birth to a puny infant, her right knee-joint became inflamed. Mr. Carter first saw her at the end of three weeks, when a free incision gave exit to a large quantity of pus, and large masses of pus-clot. The same apparatus was now applied, and though her progress was much slower than in the first case, the same result was obtained—a perfect restoration of the functions of the joint, which Mr. Carter attributes to the firm mechanical support. He lays special importance on having the splint so narrow that while it secured immobility of the joint, it did not throw off the grasp of the bandage, or interfere with its compressive action on the limb; and next in importance was the slinging from a cradle which, by allowing changes of position of the body, greatly promoted sleep, and prevented the occurrence of bed-sores.

Dr. Daly records a case in which the symptoms of a large

abdominal aneurism were present, and cure resulted. The treatment under which this happy result occurred was absolute rest in bed (the patient being scarcely allowed to speak), a nourishing, unstimulating diet, with as little fluid as possible, ice applied to the tumour, and the acetate of lead taken internally.

A case in which gastrotomy was performed for stricture of the œsophagus, under the care of Mr. Curling, is the subject of a short communication. The patient was 57 years of age, said was only four weeks ill on 30th January, 1866, when admitted to the hospital. He was much emaciated, face sallow, haggard, and anxious; he complained much of hunger, thirst, and craving at epigastrium; any solids he was unable to swallow, and fluids with difficulty and much pain. At length he ceased to be able to get even fluids down; but he would not consent to an operation till the 16th March, when he was in a state of great prostration. An opening was now made into the stomach through the epigastric region, through which he was fed. The feeling of hunger and thirst were relieved, and soon reaction set in; but he died of exhaustion 32 hours after the operation. On examination after death, a stricture of the œsophagus was found. There was no peritonitis.

Dr. Down examines the effect of marriages of consanguinity in relation to degeneration of race in the next paper. He considers the question chiefly in reference to idiotcy, 1,138 cases of which his notes refer to; but as some element of doubt attached to some of these, he bases his argument on 753 only, whose histories were perfect. From an analysis of these, Dr. Down is led to believe that relationship of parents, *per se*, is not the cause of the idiotcy, but that other causes were operating which were merely intensified by the relationship. Consanguinity has doubtless, he says, the power of aggravating any morbid tendency, as it has of perfecting any good quality, and he believes it is only one of the causes, and not the most important one, in the production of deterioration.

Mr. Hutchinson makes some observations on the results which follow the section of nerve-trunks, as observed in surgical practice. He gives the particulars of seven carefully observed cases, in which the trunks of the ulnar and median nerves were completely or partially divided, and in his comments on the series first speaks of the anatomical distribution of the nerves of the hand; and he affirms, with Swan, that the radial does not pass nearly to the ends of the fingers, as is taught by most anatomists. On the thumb, he says, it passes as high as the root of the nail; on the fore finger as

far as the middle of the second phalanx; on the middle and ring fingers not further than the first phalangeal joint. The distal parts of these fingers are supplied, both back and front, by twigs of the median, which curve backwards and encircle the fingers. Next to loss of sensation the most remarkable result is diminution of temperature. In case V. there were ten degrees of difference between the little finger of the hand from which the nerve supply had been cut off and that of the other; and it appears that, while a paralyzed part can be cooled to almost any extent, it cannot be raised by artificial heat beyond a certain point, and that point much below the maximum of its uninjured counterpart. Mr. Hutchinson is inclined to attribute this loss of temperature to a diminution in the nutritional changes in the parts, a paralysis, so to say, of the *vis a fronte* of the circulation.

In five out of the seven cases the paralyzed fingers became inflamed soon after the accident. The kind of inflammation was so similar in all, and so remarkable in some, that it seems impossible to believe it was the result of accident, and not in direct connexion with the nerve lesion. In no case did the tendency to inflammation persist long, and the parts were capable of good repair.

Injuries to the spinal column and its contents form the subject of two very valuable papers, one without any name, and the other by Mr. Hutchinson. We shall merely extract from this latter two passages:—

"There is, I think, room for much doubt as to whether the usual practice of relieving the bladder by the catheter is judicious. In a few cases where the fracture is in a certain part of the lumbar region the bladder is involved in hyperæsthesia, and the pain caused by its distention necessitates interference. These, however, are very rare, and, in almost all cases, the bladder fills without causing any discomfort whatever, and when full runs over. After a few days it regains a certain amount of tone, and empties itself very frequently. At this stage we have troublesome incontinence, and but little retention. Now, if the catheter be used from the first, inflammation of the urethra and bladder is, I think almost certain to occur, and the urine will become loaded with pus and mucus. I suspect that cystitis is, in some cases, one of the influences which brings about the patient's death by exhaustion. Not unfrequently ulcerations of the mucous membrane of the bladder occur. There is a specimen in the Museum of a bladder and rectum from a fractured spine case, in which a fistula passes from the membranous urethra into the rectum, no doubt, in connexion with the use of catheters. Why should cystitis thus constantly follow the use of catheters? Seeing that there is no impediment to the

introduction of instruments, that they give the patient no pain, and are used with the greatest ease, why should they produce so much more irritation than we usually observe when they are employed for other reasons? I think we must admit, that it is probable that the mucous membrane of the bladder when paralyzed, is in a state specially prone to inflame, just as the eye is, after paralysis of the fifth nerve. The practical question before us is, whether to permit the retention to continue until overflow takes place, is less likely to cause this cystitis than is the use of instruments. My own experience has been in favour of non-interference, and I quite intend, in the future, to make a full trial of this plan.

"In justification of the strong opinion which I have already expressed against operations with the intention to elevate depressed portions of the bone, I must say a few words more. My chief reason is that by doing so, you convert a simple into a compound fracture, and add the risks of pyæmia, together with those of spinal meningitis. Then, I urge that depressions of bone very rarely exist, perhaps not once in twenty cases, and that it is utterly impossible to select the case. The amount of displacement apparent externally will not help you much, for this may be very great, and may be due to such a twist of an entire vertebra as it will be quite impossible for you to replace. The irregular form of these bones makes it exceedingly difficult to effect the rectification of a displacement. I must insist that operations for injuries to the spinal column are not to be fairly compared with those on the skull. In the latter region, you have to deal with large smooth superficial surfaces of bone, you can easily appreciate irregularities and easily gain access to them. In the former the opposite is the fact. Nor, I believe, do clinical results as yet hold out any encouragement to those operations. This latter part of the subject I shall, however, leave for the present."

There are many other most valuable papers in this volume that we have not noticed, chiefly because no analysis could do them justice; among the rest, the reports on the late cholera epidemic, and the general statistics of the hospital, which are given in a very full and excellent form.

III. *Saint Bartholomew's Hospital Reports*, Vol. ii.—This series commenced in 1865, and we have now before us its second volume. It contains 26 papers, all of them of a very high order, and of great value, yet of a different character from those in either of the other works we have noticed, inasmuch as many of them are essays rather than clinical reports, and give us the results at which the observers have arrived, without showing us the steps in the process, or the facts from which the inductions have been drawn—a peculiarity more marked in the second volume than in the first.

In the first article Dr. Reginald Southey continues his account of the Minute Anatomy of the Kidney; in the first volume he gave a good account of the minute structure of the healthy organ, and now he discusses its pathological anatomy, intending to recount in future papers, from clinical observation in the wards, what symptoms during life accompany those lesions most commonly observed after death.

Congenital Cystic Tumour is the subject of the second article by Mr. Thomas Smith. These tumours are analogous to the hydroceles of the neck, to which attention was first drawn by Professor Maunoir, of Geneva, in a paper read at the Royal Institute of France, in 1815; but as Baron Percy presented a very unfavourable report on the memoir to the Academy of Natural Sciences in 1817, neither Maunoir's observations nor the true nature of the disease seem to have been known, in these countries at least, till the late Dr. O'Beirne, of this city, drew attention to them in the pages of this Journal in 1834. Mr. Smith refers, in his introductory remarks, to Dr. O'Beirne's paper, but has evidently not read it, as he retains a typographical error in the reference to it that occurs in Mr. Paget's lectures. It is, however, more especially to the congenital form of the affection Mr. Smith alludes, and he gives the particulars of eight cases that occurred under his own observation. The tumours are formed of an admixture of cystic and solid substances in varying proportions, and the cysts vary in size from that of a pea to a large orange. The solid element is a species of connective tissue, very tough, succulent and fetal in its character, having the appearance and consistence of the tissue surrounding the umbilical cord. The tumours, Mr. Smith believes, are always situated beneath the muscular fascia, and generally freely moveable under the skin, but their deeper connexions may extend widely and deeply beneath the muscles and around the deep vessels. They are generally easily recognized, but may often be mistaken for fatty growths or large subcutaneous nevi; when situated over the median line of the spinal column, it is sometimes difficult to distinguish them from spina bifida, but the skin covering them is healthy, and not discoloured and attenuated, as in spina bifida, and there is, of course, no indication of deficient innervation of the trunk and lower extremities. The disease may be situated anywhere in the cervical region, on the trunk, about the gluteal region and perineum, and in internal organs, but Mr. Smith has never met with it or read of it in the extremities. In four cases under Mr. Smith's care a spon-

taneous cure took place, and also in two others recorded by Wernher and Tofft, but in some situations, or from their rapid growth, remedial measures may be urgently required. The principal means that have been used are enumerated by Mr Smith as follows:—(*a*) Puncture. (*b*) The application of so-called discutients. (*c*) Laying open the cysts. (*d*) The injection of Iodine. (*e*) Complete removal by the knife. (*f*) Setons. Of these the first and second are little more than palliative; the third, fourth, and fifth are scarcely applicable in the case of infants, and the last, or the seton, is that in which Mr. Smith, along with Maunoir and O'Beirne, places most confidence; but he records the opinion of Gurlt, who thinks the seton inapplicable and dangerous, and of Storch, who considers it not particularly satisfactory. In four cases Mr. Smith used the seton, introducing but a single thread of fine silk; in one of these the tumour quite disappeared, but in the others some trace of it still remained. No mention is made of the drainage tube; in a case lately under our own care we used this method of treatment, and with the most beneficial result.

In Art. III. Dr. Newman gives a good digest of our knowledge of Diphtheria; and in Art. IV. Mr. Savory discusses the Relation of Phlebitis and Thrombosis to Pyemia, and shows that each of these affections may exist without being followed by pyemia, and that pyemia still oftener occurs without any evidence whatever of being preceded by an affection of the veins. Dr. Turner relates, in Art. V., a Case of Intra-Cranial Cyst containing hair, and also a case illustrating the Physiological action of Iodine. Art. VI., by Dr. Warter, is on the Use of the Thermometer in Disease; and in the following one, "On the Treatment of Enlarged Bursa over the Patella," Mr. Savory recommends a plan he has adopted in many cases with uniform success, and, though no novelty, he thinks it has not received the attention it deserves. It consists in puncturing the bursa with a lancet, and making firm pressure on it by pads and strapping, so as to keep its walls in contact after the contents have been evacuated.

"On Gouty and some other Forms of Phlebitis," is the title of Art. VIII., by Mr. Paget. In the opening paragraph Mr. Paget says he has met with certain cases of phlebitis, the like of which he cannot find on record. The following extract gives an account of gouty phlebitis:—

"Gouty phlebitis is far more frequent in the lower limbs than in any

other part; but it is not limited to the limb that is, or has been, the seat of ordinary gout. It affects the superficial rather than the deep veins, and oftener occurs in patches, affecting (for example) on one day a short piece of a saphenus vein, and on the next day another separate piece of the same, or a corresponding piece of the opposite vein, or of a femoral vein. It shows herein an evident disposition towards being metastatic, and symmetrical; characters which, I may remark, by the way, are strongly in favour of the belief that the essential and primary disease is not a coagulation of blood, but an inflammation of portions of the venous walls. The inflamed portions of vein usually feel hard, or very firm; they are painful, aching, and very tender to the touch; such pain, indeed, often precedes the clearer signs of the phlebitis, and not rarely begins suddenly. The integuments over the affected veins (where they are superficial), are slightly thickened, and often marked with a dusky reddish flush. When superficial veins alone are affected there may be little œdema; but when venous trunks, as the femoral, the whole limb assumes the characteristics of complete venous obstruction. It becomes big, clumsy, featureless, heavy, and stiff; its skin is cool and may be pale, but more often it has a partial slight livid tint, with mottlings from small cutaneous veins visibly distended. The limb thus enlarged feels œdematous all through; but firm, and tight-skinned, not yielding easily to pressure, and not pitting very deeply. By this state almost alone the disease must sometimes be recognized, for it may be very marked when only a small portion of vein is affected, and that (as the lower part of the popliteal) so deeply seated as to be scarcely felt."

Mr. Paget refers to some cases of pulmonary embolism in connexion with gouty phlebitis, one of which proved fatal, but he does not think it more frequent in this form than in others, and as to treatment says he has never seen benefit from active measures, such as leeches, mercury, &c. He relies on diminution of food and stimulants, on alkaline drinks, increase of water drinking, rest and warm fomentations.

Two cases of widely-diffused phlebitis, not necessarily gout, are related in this paper. In one, the only case of the kind Mr. Paget has ever seen, the disease extended through large portions of the branches of both the superior and inferior venæ cavæ; this proved fatal. In the other the disease was not so widely spread, and the patient recovered.

In another class of cases, gouty or not, a single small portion of a great vein becomes obstructed, of which three examples are given, a marked feature of which was the apparent and, Mr. Paget believes, real enlargement of the muscles of the limb; and he quotes a letter

from the late Professor Laurie, of Glasgow, who describes himself as having had this form of the affection, causing the calf of the affected leg to measure an inch more than the other, and though the disease began in 1831 the enlargement still existed in 1858.

Mr. Callender contributes Art. X. on Rupture of the Axillary Artery in reducing Dislocations of the Shoulder Joint. He relates a case in which this accident occurred in reducing a dislocation six weeks old, and where, after some time, he cut down on the artery, and tied it above and below the laceration, having first turned out the clot. For four days the patient did well, but then the arm became gangrenous, and the man died on the 9th day, somewhat suddenly, with symptoms of pulmonary embolism. Mr. Callender gives the history of another case, in which Mr. Paget performed the same operation, and the patient recovered. He has collected thirty-one cases of rupture of the axillary artery, and gives the particulars, in a tabular form, at the end of his paper.

Mr. Vernon gives an interesting Case of Congenital Myopia, with a faulty perception of Colours, limited to a small portion of one Retina, of recent origin; and the same writer describes a Case of Wound of the Right Lumbar Region, involving and laying bare the Kidney, in which a complete recovery was made. Mr. Coote contributes two papers, one on Rectangular Talipes Equinus, and one on the Pathology and Treatment of Joint Disease. We shall have occasion to notice his views at an early date, in reviewing his recently-published volume on Joint Diseases. Chronic Inflammation of the Cancellous Structure of the Bone is the form of disease dwelt on in this paper. Another paper on Joint Disease is contributed by Mr. Howard Marsh, who writes on the Prejudicial Effect of Inter-Articular Pressure, and recommends the application of continuous extension by means of a weight, to oppose the muscular action which presses the surfaces of the joint together. In the following passage we have an account of the method of using the weight:—

"In spite of Sir Benjamin's advocacy, and although it has been used from time to time by many of the highest surgical authorities, the weight has failed to come into general use in England; probably for the want, which has till recently existed, of some simple and safe method of adjusting it to the limb. American surgeons, however, employ the weight very largely in the case of all the joints; and by the help of the 'strapping stirrup,' invented by Professor Pancoast, of Philadelphia, are enabled to apply it with the greatest facility. Although Pancoast's stirrup is very

commonly adopted in England for making extension from the foot by fastening this to the end of the long splint, in the treatment of fractures of the thigh, I shall venture to describe the manner of its application when the weight is required for disease, either of the hip or the knee. A long piece of stout adhesive plaster, from two to four inches wide, according to the size of the limb, is bent upon itself at its middle, and made to adhere to the leg as high as the knee, one half running up the outer, and the other up the inner aspect of the limb; a loop or 'stirrup,' between four and five inches deep, being left below the sole. The two pieces running up the leg are secured by circular strips and a lightly applied bandage. The weight is suspended in mid-air, at the foot of the bed, by a stout cord, tied into the stirrup.

"It will be found convenient to attend to the following details in the use of the weight. Time should be allowed for the strapping to become thoroughly adherent to the surface before the weight is applied, otherwise the stirrup is apt to be dragged off. A few hours (six or eight) are sufficient for this. The strapping ought to be of stout material, and recently made. Care should be taken to defend the malleoli from too great pressure by the sides of the stirrup; for this purpose, American surgeons are in the habit of using what they term a 'spreader.' This consists of a thin piece of wood, a little longer than the foot is wide, which they place transversely in the stirrup, just below the sole, like the 'set-stick' in a horse's trace. A pad of cotton wool placed above each malleolus will answer the same end. Some patients, when the weight is applied, acquire the habit of sliding down in bed till the weight lodges on the floor. This may be effectually prevented by raising the bottom end of the bed six or eight inches, by placing books, or wood blocks, or bricks under its feet. The amount of weight which it is proper to apply is a point of great importance; but it must often be a matter of experiment to ascertain, in any case, how much is required. As a general rule, for children between the ages of six and nine years, four pounds are appropriate; but, while I have seen it necessary to apply as much as twelve pounds, gradually accumulated upon four, in a case of recurring muscular contraction in old hip disease, in the person of a child eight years old (Case No. IV.), I have found in other instances that children of this age complain of any weight exceeding three pounds. The weight should be as small as is consistent with its purpose of relieving pain, and preventing or removing distortion; so that it is advisable to diminish the amount as symptoms subside, and not to continue to employ a heavy weight after it has become unnecessary to do so."

Mr. Langton recommends the use of steady and uniform pressure by means of a compressing bandage, for the treatment of irreducible

hernia, allowing the patients to follow their usual occupation while using it, and trying to improve their general condition. The Inheritance of Cancer and its Relation to Questions concerning the Local or Constitutional Origin of the Disease, is the subject of Art. XIV., by Mr. Morant Baker, who argues that a special constitutional condition precedes the formation of a local cancerous growth. The remaining papers are on Oxaluria, by Dr. Duckworth; on the Treatment of Acute Pericarditis, by Dr. Farre; Surgical Cases from the Devon and Exeter Hospital, by Mr. Delagarde; a Case of Profuse Venous Hemorrhage from the left Meatus Auditorius Externus, consequent on a fall on the back of the head, by Mr. Holden, in which the patient made a good recovery. Mr. Eck records a Case of Aneurism of the Lower Part of the Common Iliac, of the External Iliac and Femoral Arteries, successfully treated by Pressure of the Abdominal Aorta. The patient was an Irishman, named Cusack, who had been under treatment in Cork and Tralee, and in Vincent's and Steevens's Hospitals in Dublin. Pressure was applied by means of Lister's tourniquet, over the bifurcation of the aorta, from 9.30 a.m., till 1.30 p.m., on the 5th May, chloroform being administered at intervals; when the pressure was removed, pulsation returned in the tumour, but to a limited extent only, and the tumour gradually consolidated and diminished in size. The man ceased to be troubled with the beating in the groin, and became able to walk about without aid, or support, or fatigue, or any injurious effect on the tumour.

Mr. Holden contributes an essay on External Anatomy, under the title of Medical and Surgical Landmarks. Dr. Edwards records the Termination of the Second Case of Poisoning by Mercuric Methide. Mr. Callender describes an operation for a Stricture of the Urethra, after the method suggested by John Hunter. The bladder had been tapped above the pubes some time previously; a catheter was now passed through this opening into the bladder, and thence into the urethra, when another was passed from the meatus, and the intervening space laid open from the perineum. Dr. Edwards writes on the Value of Palpation in the Diagnosis of Tubercular Disease of the Lungs, and the volume closes with Extracts from the Statistical Report of the Hospital for the year 1865.

*Hysteria—Remote Causes of Disease in General—Treatment of Disease by Tonic Agency—Local or Surgical Forms of Hysteria, &c.* By F. C. SKEY, F.R.S., late President of and Member of the Council, and of the Court of Examiners of the Royal College of Surgeons of England, &c.

THIS little volume comprises six lectures delivered by the well-known consulting surgeon of St. Bartholomew's to the students of that hospital.

The first two lectures are devoted to the discussion of such of the principles of medicine as, in the author's opinion, "involve the essence of medical and surgical practice," and include the nature and treatment of congestion, a consideration of the remote causes of disease, and an explanation of the *rationale* of the tonic and stimulant plan of treatment, of which Mr. Skey is a warm advocate.

Mr. Skey dwells on the importance of discriminating congestion from inflammation as a guide for the employment of stimulants. He believes that the co-existence of the four classical signs—heat, redness, pain, and swelling—is necessary to enable us to pronounce on the existence of true inflammation.

He states that the blood in the vessels of a part in a state of congestion "may be forced onwards, by giving increased action to the heart, by the resort to agents that tend to restore the healthy tonic condition of, or, at all events, to give force to, the capillary system of the affected part."

That he is opposed to the employment of stimulants in cases of genuine inflammation, is evident from the following passage. Speaking of some cases in which, on the third or fourth day after operations, congestion of the vessels around the wounds had occurred, and in which Mr. Skey had administered stimulants liberally with excellent effect, he observes:—"If these examples of local congestion of the blood vessels partook of the nature of inflammation, you, I am sure, will concur with me in considering this treatment a blunder. If stimulants be inadmissible in the treatment of inflammation, the treatment should have proved injurious. This it did not prove, but, on the contrary, effected early and curative results; therefore, the disease was not that of inflammation."

In the same lecture, however, Mr. Skey recommends strongly

the free use of stimulants and tonics in cases of incipient mammary abscess, an advice which seems to be in opposition to the opinion just quoted, as undoubtedly a large number of cases of mammary abscess are preceded and accompanied by inflammation, presenting the four classical signs in a very high degree of perfection.

The majority of physicians will no doubt consider Mr. Skey's therapeutics of congestion as too exclusively mechanical, and we think few practical men in this country will be found to coincide with his views as to the inadmissibility of stimulants in cases of inflammation.

The third and fourth lectures contain a good account of the nature and symptoms of hysteria; the remarks on the error, formerly so prevalent, of founding a diagnosis of disease of the spine on the existence of spinal tenderness on pressure, are very useful and forcible. The last two lectures contain an interesting summary of many of the local manifestations of hysteria. In addition to general tonic treatment, Mr. Skey speaks highly of the local application of *extractum opii fluidum*, on lint, to the painful parts.

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1. *On Railway and other Injuries of the Nervous System.* By John Eric Erichsen, F.R.C.S., &c. 8vo, pp. 144. London: Walton and Maberly. 1866.

2. *A Practical Treatise on Shock after Surgical Operations and Injuries.* By Edwin Morris, M.D. 8vo, pp. 88. London: Hardwicke.

3. *Railway Accidents and Collisions; their Effects on the Nervous System.* By William Camps, M.D. 8vo, pp. 20. Second Edition. London: H. K. Lewis.

The part to be played by the physician and surgeon in connexion with the various questions arising out of injury sustained in railway collisions, and as the result of accidents of other kinds, is one of great importance, and involves considerations which often test to the uttermost the finest powers of diagnosis and prognosis. Injuries attended with but slight symptoms of functional or organic derangement at the outset, may eventuate in irremediable disease at a period more or less remote. While, on the other hand, it cannot be denied that unscrupulous individuals will often seek, by the well feigned

simulation of symptoms of popularly recognized states of disease, to trade on the feelings of compassionate jurymen, and to extort exorbitant damages for ailments which are at best only trivial, often wholly fictitious. Keen powers of discrimination are here called for on the part of the physician.

Of the extent to which questions of compensation for railway injuries annually come to be dealt with, the following summary will convey some idea:—In the year 1864, there were killed and injured, from causes beyond their own control, a larger number than in the preceding year. The total killed for the United Kingdom, amounting to 36, and those in various degrees injured to 700.

In the year 1865, the following sums were paid by way of compensation, by various railway companies:—Caledonian, £12,849; Great Eastern, £21,996; Great Northern, £22,387 (including damage and loss of goods); Great Western, £40,061; Lincolnshire and Yorkshire, £24,708; London and North Western, £30,728; London and South Western, £25,000 (including loss of goods); London, Brighton, and South Coast, £4,504; Manchester, Sheffield, and Lincolnshire, £6,483; Midland, £25,958; North Eastern, £14,355 (including loss of goods); North British, £4,621; and South Eastern £70,726.

In one case £12,000 was claimed by the patient, and £4,700 awarded by the jury. In another case £7,000 was awarded. In numerous instances the conflict of medical testimony is the subject of wonder, viewing the extraordinary dissentions of opinion called forth.

With the pecuniary and other interests thus involved, it is not matter of surprise that the subject is one of profound interest to the public and the profession.

Dr. Camps treats his subject in a pamphlet, for we can give it no more important designation, and it appears to have reached a second edition. By what fortuitous circumstance it has gained a circulation which warrants the issue of a reprint—for such it would seem to be rather than a re-edited, amended, expanded, or in any way improved version of its first form—we are at a loss to discover. It is ill and carelessly, not to say illiterally composed. The following may be taken as a sample of what Dr. Camps thinks fit intellectual entertainment for the Harveian Society, and the general public:—"Now what are we to understand by the *nervous* system, that part of the body personal, which we know to be affected

by railway accidents and collisions? By the *nervous system* I wish, on the present occasion, to convey to my hearers," *i. e.*, the members of the Harveian Society, "that I would be understood to include the entire nervous mass or masses with their ramifications throughout the human framework, &c." Further on, in the same paragraph, we are informed that he "can scarcely conceive of extensive injury sustained by blood vessels, without some corresponding degree of injury sustained by nervous tissue, so intimately are the *blood tissue* and the *nerve tissue* related to each other in all parts of the human body." The next paragraph informs us "that one of the sad results of railway accidents or collisions must be the production of altered or perverted structure of the nervous system, the production of living morbid anatomy of such parts, and if morbid anatomy or diseased structure, why, then, in the nature of things, we must have morbid physiology or pathology."

We ask, in all earnestness, how came the Harveian Society to tolerate such slop as this? how illimitable must be the assurance which would make a man fit to give utterance to such inanities in any assembly of his medical brethren. It is too jejune for the most unenlightened mechanics' institute audience which it has ever been our portion to know of; and even allowing the widest limits to a dissertation intended for a popular assembly, it cannot be supposed capable of affording instruction or entertainmet.

Perhaps our author's aim may be best surmised from passages, of which the following is a sample:—"Yet, as one deeply interested in the entire group of morbid phenomenon affecting the *nervous system*, I may claim to have paid some considerable share of attention to many of those cases that of late became publicly known, from having been made the subjects of claims for compensation before the legal tribunals of our country." This is but an unskilful and ill-veiled *ad captandum* appeal to all the possible victims of railway "accident or collision," whatever be the distinction in Dr. Camp's highly logical mind: with a pretty clear indication by way of genteel advertisement, as to where they may find sympathizing, if not too scrupulous, medical aid, when the day of trial (by jury) comes. With these observations we shall dismiss Dr. Camps, with a last expression of regret, that a society which holds amongst its members so many honoured names, could allow itself to be made the medium of circulating such a pamphlet as that before us, the scope and object of which are but too apparent.

Dr. Morris's essay on "Shock" will repay perusal, though, as we

will have presently to notice, his views are not in all respects such as we can endorse. As a striking example of the effect of shock, he cites the well-known instance of the brave Spanish officer in the Duke of Alva's army, whose hair turned white in a single night, after being told in joke by the Provost-marshal that he was to prepare for instant execution, although he was almost immediately undeceived.

Of the remarkable occurrence of death from shock after operation, the works of all the great surgical authorities, from Cooper (Sir Astley) to Paget, furnish notable instances. Extensive injuries in like manner not unfrequently produce death after a longer or a shorter interval, without the concomitant of hemorrhage or other sensible or palpable physical loss. Nothing is more impressive, when first seen, than to observe, perhaps a large and powerfully-built man sinking painlessly and silently after an injury which has carried off a limb. Of this, it has occurred to the writer to see striking illustrations as the result of gun-shot wounds and shell explosions. The case may be cited of an able and athletic Turk whose right thigh was carried off by a round shot while he was engaged in conveying water to the occupants of an advanced parallel before Sebastopol. He was removed to an hospital in the rere, and survived some three or four hours. The limb presented a jagged, irregular, and very oblique surface, from or rather upon which the femoral artery hung out some two inches in length; but neither from this vessel nor from any other large or small artery or vein was there the smallest particle of hemorrhage. The patient exhibited no sign of pain, was conscious, and apparently resigned, and sank silently and quietly out of existence. In another not less remarkable instance, also within the cognizance of the writer, an officer, whose thigh was carried off by a shell explosion, was able for some moments to hop about on his remaining leg, giving some directions for the care of others wounded by the same explosion; but he soon became oppressed with "shock," and died while being carried to the rere. There was no hemorrhage from any vessel in the shattered limb in this instance either. Death from shock after burns is well illustrated by the cases cited by Dr. Morris. The symptoms, progress, and treatment of shock are next succinctly treated. A special section is devoted to the consideration of "shock from railway injuries," and under this head much that is of a critical and controversial character is introduced, the writings of Mr. Erichsen being the chief object of assault. Our author

finds fault in an especial manner, and, in our opinion, with great justice, with the sensational terms too constantly employed in connexion with railway injuries. But it would appear to us that while avoiding Scylla, Dr. Morris has fallen into Charybdis, and in his well-meant zeal to decry professional partiality for the public, when they become the subjects of railway injury, he falls into the opposite extreme, and becomes the advocate of the railway interest. He seems to speak throughout as the *amicus curiæ*, *i.e.*, of the railway, and as if all claims for compensation were mainly instituted on a fraudulent basis, and bolstered up by the undiscerning and (suggestively) unscrupulous aid of the physician or surgeon in attendance on the patients. We regret to find a member of our profession suggesting that a system of *espionage* should be kept up upon patients till a trial takes place. A more debasing occupation for a medical man we cannot well conceive, and no other than a physician or surgeon could fill the office suggested with any prospect of drawing conclusions capable of being used at a trial with any effect. We cannot think such advice a practice calculated to raise the writer—or his profession, if they followed his teaching—in public estimation.

Dr. Erichsen's work is one which has already excited notice of no partial character amongst some of his critics. If open to cavil, it is redeemed by much that is interesting and instructive. Amongst the most noteworthy and protracted cases of injury of the spine, Dr. Erichsen cites the well-known history of the Count de Lordat, a French officer of distinction, injured by being thrown from his carriage in April, 1761. He went through the subsequent campaign of that year, and it was not till nearly four years after the receipt of the injury that he finally succumbed, after a period of much suffering and distress. We have ourselves seen a well-marked instance of death, after nearly two years' interval from the time at which a gentleman was thrown from his gig, flat on his back, on a hard road. A period of apparent immunity intervened, but fatal spinal symptoms ultimately came on.

That similar results will occur, after injuries sustained in connexion with railway accidents, cannot be doubted; and it is in dealing with cases in which a more or less well marked interval of apparent immunity from suffering or symptoms of spinal lesion presents itself, that the nicest skill in diagnosis and prognosis is required; and it is further to be observed that such cases are more liable to the charge of malingering, until the reality of the malady

with which the patient is threatened becomes apparent to all by the ultimate development of the unmistakable phenomena of paralysis, marasmus, and too often death, finally. It is not made sufficiently apparent, in either of the two works before us, which deserve serious attention, that of Dr. Erichsen or Dr. Morris (for we wholly dismiss Dr. Camps and his essay), in what class of accident, and in connexion with what pathological state, we are to look for immediate or remote results from injury to the spine. It would seem to us that the following classification of such injuries may be adopted:—

*a*. Injuries to the bony coverings of the spinal marrow, in which the symptoms follow more or less immediately upon the accident which causes them, and in which they will vary in kind and degree, proportionately with the amount of physical lesion.

*b*. Injuries in which, by any concussing or disturbing violence, the vascular apparatus of the membranes of the spinal cord, singly; or the spinal cord, itself, singly; or both, conjointly, are stimulated to increased activity, and acute or sub-acute meningitis, or acute or sub-acute myelitis is set up within an interval corresponding to the ordinary period of reaction in other cases of injury, and in which symptoms, more or less well marked, are exhibited within from six to twenty-four hours after the accident to which the patient has been exposed.

*c*. Lastly, injury chiefly, if not wholly, affecting the spinal marrow in such manner as to set agoing a very slow process of physical change in its histological elements; in which, therefore, symptoms are but very slowly evidenced. Such cases are all the more dangerous from their insidious approach, and can only be rightly interpreted by one who has made the most diligent study of all that has been established of late years with regard to the physiology and pathology of the spinal cord.

In dealing with cases of railway or other injury to the spinal cord, its coverings or membranes, the physician or surgeon has to address himself to the study of the questions concerned in the pathology, diagnosis, and treatment of the three forms of spinal affection just enumerated.

That something special attaches to injuries of the spinal cord, the result of railway accidents, is strongly affirmed on the one hand, and loudly denied on the other (see Morris *passim*). For ourselves we cannot but believe that injury to the human frame, in the special state of tension which it is thrown into by railway

travelling, especially at high velocities, has something of a special character, and is usually more intense in degree, though not different in kind, from injury received under almost all other circumstances. In conclusion, we would say a word to our professional brethren as to the part they are now so often called upon to play in connexion with railway injuries; and it is this—to avoid being the advocates, either of the Company or the injured party; to give an impartial report of the nature, degree, and probable consequences of the injury; and to refer to an actuary all calculations as to the amount of damages.

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1. *On Diseases of the Lungs and Air-passages; their Pathology, Physical Diagnosis, Symptoms, and Treatment.* By Henry William Fuller, M.D., Cantab.; Physician to St. George's Hospital, &c. Second edition. London: John Churchill and Sons. 1867. 8vo. Pp. 534.

2. *Physiological Remarks upon the Causes of Consumption.* By Valentine Duke, M.D.; Fellow of the Royal College of Surgeons; Licentiate of the King and Queen's College of Physicians. Dublin: Fannin and Co. 1867. 8vo. Pp. 108.

3. *On the Treatment of Pulmonary Consumption by Hygiene, Climate, and Medicine.* By J. Henry Bennet, M.D., &c. London: John Churchill and Sons. 1866. Pp. 56.

4. *On the True First Stage of Consumption.* By Horace Dobell, M.D., &c. London: John Churchill and Sons. 1867. Pp. 75.

5. *Change of Air considered with regard to Atmospheric Pressure in the Treatment of Consumption and Chronic Disease.* By J. C. Atkinson, M.D. London: Trübner and Co. 1867. Post 8vo. Pp. 142.

6. *On the Treatment of Consumption, with Notices of Successful and Unsuccessful Cases.* By Charles Thomason Thompson, M.D. Second edition. London: Robert Hardwicke. 1867. Pp. 29.

Dr. Charles Thomason Thompson informs the public, for

whom we presume his pamphlet must have been written, that having followed for years in the treatment of consumption the usual method, he found it to be "a practice fraught only with death," and therefore addressed himself with "agony and anxiety" to the task of discovering a better. In this he soon succeeded, and since then, under his management, "in all cases it has been most interesting and most delightful to observe how the symptoms appear to unwind themselves." In the only case in which he informs us what he did, ice to the chest and cold sponging to the other parts of the body constituted his treatment; but "it is impossible to give the explicit instructions necessary for each case," and those who require them must, we presume, go to 10, Sussex-street, Warwick-square. Before they decide, however, it is only fair they should know what Dr. Atkinson has to say for himself:—"By the study of the barometer I have been led to anticipate answers to my questions in such a way as to convince my patients that I possessed some secret means of discovering their diseases which was peculiar to myself, and which gave me an importance in their eyes as possessing a prophetic spirit." To avail themselves of this power of divination they may, instead, turn their steps to the consulting room in Bessborough Gardens, as in either case they will doubtless have to pay their money, let them take their choice.

By the true first stage of consumption Dr. Dobell means the stage which precedes the deposit of tubercle. As our readers are aware, he considers tuberculosis to be due to a defect in the action of the pancreas on the fat taken as food, especially the solid fat:—

"The supply of properly prepared fat is cut off from the blood: 1, by the fats not being brought into a proper condition by the pancreas; 2, by loss of absorbing power in the small intestine, due to the repeated contact of unhealthy pancreatic juice, and of defectively prepared food with its mucous membrane. Thus the blood becomes defectively and deficiently supplied with fat-elements from the food; is unable to afford those required for direct combustion: does not replace those taken up during the interstitial nutrition, but, on the contrary, takes up more, to compensate the deficient supply from the food. This having gone on up to a certain point, the fat-elements of the albuminoid tissues are seized upon, and these tissues are minutely disintegrated in the process. This disintegrated albuminoid matter is *nascent tubercle;* and this process of disintegration is *tuberculization.*'"

The indications that this has begun are obscure. Dr. Dobell

does not hope to be able to convey to his readers in words such an impression of the symptoms and signs as will enable them to recognize its commencement; the ability to do this can only be acquired "by watching hundreds of cases in all the modifications due to mental and bodily confirmation, complexion, temperament, habits, age, sex, occupation, class in society, and the like." This, doubtless, he has done. There are, however, some indications which are sufficiently tangible to be appreciated by less cultivated practitioners; and when these are present they should, we suppose, instantly seek for their patients the advantage of further advice. These indications are afforded by "loss of fat and of flesh, loss of strength, and disturbance of temperature and of excitability." The importance of immediate treatment is insisted on as soon as the diagnosis of deficient action of the pancreas has been satisfactorily made, and the true remedy is said to be "cold dry air without wind, and plenty of it; exercise in such air, and exhilarating society; clear, dry, windless, cold, out-of-door exercise, and good spirits, constitute the essence of stimulation to the pancreas. It is astonishing how the organ leaps into action under these influences." But complications are met with in almost every case which demand attention. The stomach and the small intestines may be already so much disturbed in their functions as to require special treatment, or there may be some non-tubercular affection of the chest present which must be disposed of. Worse than all, the habits and circumstances of the patient may be such as to render it impossible for him to command the cold dry air and the exhilarating society his pancreas wants. "What is to be done?" "Every hour is precipitating the patient further into the depths of tuberculosis." "It is in this place that *pancreatic emulsion of solid fat* comes to the rescue and assumes such incalculable importance in the treatment of the first stage of consumption." Pancreatic emulsion, as every one now knows, was originated by Dr. Dobell; and it is not to be wondered at that he is somewhat extravagant in his laudation of it. If, however, he succeeds in obtaining for his patients the cheerful society he so strongly recommends, and the cooked meat, and game, and dried fish, and cheese, and vermicelli, and rice, and sugar, and milk, and green vegetables, and pint of Burgundy, recommended in the diet tables, which have of late drawn down upon him the censure of his professional brethren, we are not surprised that the pancreatic emulsion does good. We have not had much experience in its use, but within the past few days we

happened to see a young lady who has been taking it for months; and while doing so she has been changed from a thin, nervous, desponding creature, into a plump, tolerably robust, and cheerful woman. Up to the beginning of last summer she was living in one of the dullest and least interesting country towns in Ireland; she had no society beyond the family with whom she lived, and it was composed of persons much older than herself, who with a mistaken sense of duty repressed all youthful pleasures. Outside the house there was no inviting prospect; inside there was cheerless quiet, and so the dreary winter slowly passed and left her weak and sickly. In spring she went on a visit to a kind relative who lived in a very pretty country seat, and had a famous cook and a good cellar, and the best dairy in the county; and she drank cream, and drove about, and went to croquet parties, and took Dr. Dobell's pancreatic emulsion, and grew stout and strong; in fact, she did exactly what Dr. Dobell very wisely tells people to do. Our trial of his preparation has, however, been too limited to justify us in expressing an opinion on its virtues; but we are inclined to think that Dr. Fuller gives in the following extract, which we take from the work which stands first on our list, a pretty fair estimate of its value and of the pathological hypothesis on which its use is recommended:—

"It has been suggested by Dr. Dobell that the constitutional disturbance so remarkable in consumption is due to the imperfect assimilation of fatty matters consequent on defective action of the pancreas, and he has proposed to remedy this deficiency by the administration of pancreatine, either alone or in combination with fatty matters, in the form of emulsion. He affirms that many persons who cannot digest fat, and are unable to assimilate, and therefore to profit by cod-liver oil, can take fat or oil when formed into an emulsion by means of pancreatine, and that under its use the strength and weight of the patient improve, and, in many instances, the progress of the disease is checked. Nay, more, he has published reports in the journals wherein he endeavours to show by statistical reports that its action is almost uniformly beneficial. I wish it were in my power to endorse his statement or confirm his favourable report. Experience, however, leads me to demur to his theory, and to question the value of the practice founded on it in most cases of consumption. The pancreas is not the only organ concerned in the emulsification of fat, and no proof has been adduced that the pancreas is diseased in those cases in which fat is not easily digested. Further, it oftentimes happens in consumption that there is no disinclination to take fatty

matters, and no apparent difficulty in digesting them; on the contrary, fat is often eaten greedily and digested readily by this class of invalids. In these instances, therefore, it can scarcely be pretended that a deficiency of pancreatine is the cause of the complaint, and the administration of pancreatine, whether alone or combined with fat in the form of emulsion, is found not to afford the slightest benefit. I have watched its effect under these circumstances too often to be mistaken in my conclusions. Nevertheless there are cases in which the utility of pancreatine does not admit of doubt. The repugnance to fatty and oleaginous matters exhibited by some consumptive patients is so great that they cannot be induced to take them, and even if they do swallow them they either eject them by vomiting or find their digestive organs completely upset. In these cases the pancreatic emulsion is useful in supplying an important element of food in a form in which the digestive organs can deal with it. Several patients under my care, who have evinced an utter indisposition to take fatty matters, have derived much benefit from the pancreatic emulsion. But it must not be assumed that this is the only form in which fatty matters can be taken under the conditions just referred to. Even when the stomach rejects fat at dinner, and is unable to digest oil in its natural state, it will often receive either the one or the other when made into an emulsion by means of liquor potassæ or some other alkali, in which case I have usually found that the cod-liver oil proves more beneficial than the pancreatic emulsion. But in cases characterized by such an intolerance of oil and fat that the addition of alkalies does not suffice to ensure their favourable reception by the stomach, pancreatic emulsion may be fairly tried as a remedy from which much benefit may be expected. In some such cases it can be taken and digested readily, and under these circumstances it is of considerable value."

But the adoption of Dr. Dobell's views as to the production of tubercle would lead to a change of practice in the very important matters of exercise and exposure to air. Before the formation of tubercle has set in, before, according to his theory, the oxidation of the albuminoid tissues has commenced, while yet we have to deal only with a sluggish pancreas dry *cold* air, and exercise in it, are essential parts of our treatment, but if once tuberculization has begun, every atom of oxygen which enters the system increases the destruction, then a climate is required in which the atmosphere, rarefied by heat and diluted by watery vapour, will supply oxygen in diminished quantity, and exercise should be reduced as much as possible until we have introduced into the blood hydro-carbon sufficient for the oxidation which occurs during the growth of new tissues, and the production of heat; a hot dry air he considers only

desirable when there is a tendency to catarrhal affections of the air-passages and local congestions. It has long since been observed by physicians that the preparations of iron exercise in many cases of phthisis a very unfavourable influence; this, according to Dr. Dobell, arises from their increasing the red corpuscles of the blood, and hence its oxygen carrying powers. We do not know what Dr. M'Cormac, whose work we noticed in a former number, will say to such doctrines. Exercise should undoubtedly always stop short of fatigue, and exposure be prudently regulated, but our experience of fresh air, and moderate exercise, even when the deposition of tubercle had undoubtedly begun, and when the state of the digestive organs prevented the introduction of fatty matters in any quantity, does not lead us to endorse the author's recommendation. For those indeed who can afford a carriage, or a boat, or a horse, the expenditure of strength in walking had better be avoided; but we not unfrequently see hospital patients in whose lungs deposit was increasing and softening while they remained in the wards, regain, to some extent, their strength, and hold their ground while pursuing their occupations in the open air.

Dr. Henry Bennet does not profess to offer much information which is new; he desires only to be the exponent of the views now held by the majority of experienced physicians on the treatment of consumption, and to bear his testimony to the curative powers of the measures which, at the present day, are by them recommended; there is one matter to which he specially drew attention last year in a communication to the *Lancet*, and which he again notices; the frequency with which phthisical women have some uterine ailment, and the prejudicial effect it has in keeping up irritability of the stomach and preventing the nourishment of the patient. He discusses the treatment of consumption under the three divisions of hygiene, climate, and medicine; he advocates good food, fresh air, the cold bath at a temperature of 62° to 68°, and rest from occupation; much active exercise he considers a great mistake; as a summer residence he thinks there is none better than that of the British Isles; a winter residence for the consumptive should be dry, cool, sunny, and bracing; and such a climate he considers is especially to be found at Mentone, from a residence in which he has, in his own person, derived much benefit. On the use of drugs he has nothing to say which will assist those who are familiar with the ordinary works on diseases of the chest. In his concluding chapter he gives some good advice to those who by the combined use of the measures

he has discussed, are brought to a state in which the tubercular deposit is quiescent; he advises them to avail themselves of such lulls to change their occupations, their residences, and their habits of life, and to refrain from embarking in projects which will severely tax their vital powers.

Consumption would be a less common disease if the public and profession were sufficiently alive to the importance of the subjects well dwelt on by Dr. Duke, an abundance of pure air, and a sufficiency of wholesome food and drink, with moderation and temperance in their employment, occupation for the mind, freedom from too great care and anxiety, bodily exercise, cleanliness of person and clothing, regulated by climate and season; the necessity for those he shows on physiological grounds, the danger of neglecting them, he attests as a result of his extensive observations, and we hope his volume will, as it should do, draw attention to them.

We have been in the constant habit of referring to Dr. Fuller's work, and we confidently recommend the revised edition; from it the student will derive valuable aid in his difficulties, and the practitioner thoroughly practical assistance in his anxieties; the chapter on the subject more immediately before us is admirable. In our notice of Dr. Pollock's work on the *Elements of Prognosis in Consumption*, we took occasion to recommend that those who had a hereditary tendency to consumption, but in whom as yet the disease had not been actually developed, should not be sent to winter in a southern climate, but should be kept at home, and exposed to the bracing influence of our northern winter. Confirmatory of this recommendation are Dr. Fuller's observations on climate; he reminds his readers that the removal of the tubercular cachexia depends on improvement in the functions of assimilation and nutrition, and that many persons are conscious of enjoying better health and greater vigour, and a more healthy appetite, and comfortable digestion in winter than in summer; and draws attention to the fact that to a large proportion of consumptive invalids the warm weather of of spring and summer is most fatal; and that investigations into the geography of phthisis prove that cold is, if anything, preventive of the disease; some, too, of the most remarkable recoveries, which have come within his own cognizance, have been in the persons of those whose occupations or necessities have driven them to the cold regions of the North.

"I do not wish to imply by the above statement, nor to adduce the

foregoing facts to prove, that warmth is always or even generally prejudicial to persons of a consumptive tendency. That would be an error precisely similar to the one against which it is my wish to protest. Nothing is more certain than that a warm atmosphere is of all things that by which many persons suffering from the tubercular cachexia are most likely to benefit. Their organization is delicate, their circulation weak, their extremities are often cold, they are pinched and prostrated by a low temperature, and they are very susceptible of damp. To such persons a warm atmosphere is invigorating in the highest degree, and without its aid medicine and the most carefully regulated diet are of little avail. My wish is rather to point out that, whereas many persons are benefited by warmth, others are equally benefited by cold, and that the opposite opinion, which is commonly and rigorously enforced in practice, is constantly leading to lamentable results. The rapid progress which consumption sometimes makes in patients who have gone abroad for their health, and which is often attributed to their having delayed their journey too long, is referable in most instances to the fact of the individuals in question being persons who are naturally benefited by a cool, bracing atmosphere, and who sink at once when sent to the warm and enervating climate of the south.

"It may be asked, what facts are calculated to assist us in determining the sort of climate by which a patient is likely to be benefited? The question is somewhat difficult to answer, inasmuch as a change of climate implies not only a change of temperature, but a change in the humidity and electrical condition of the atmosphere, in the degree of its barometric pressure, in the force and direction of the wind, and probably in many unknown but potent telluric influences productive of marked effects on the animal economy. Nevertheless, though much uncertainty must exist, there are certain points which will serve in most instances to guide us to a correct opinion. The most important of these are—First, the sort of climate and the degree of temperature which formerly suited the patient's constitution, or, in other words, agreed best with him when he was in health; and, secondly, the state of the patient's bronchial mucous membrane at the time when his removal to another climate comes under consideration. It is obvious that if the bronchial mucous membrane is irritable the invalid cannot bear the effect of a very dry and stimulating atmosphere, however warm the locality may be. His symptoms require a soft atmosphere, and its temperature and the precise degree of humidity which is necessary must be determined, by reference to his constitutional peculiarities. Thus, if he formerly enjoyed better health in summer than in winter, and felt in greatest vigour in very warm weather, and in an atmosphere devoid of markedly stimulating or relaxing qualities, the probability is that the climate of Syria, Persia, Rhodes, Egypt, Algeria,

and other parts of Northern Africa, would exercise an influence on his system the good effect of which could hardly be over-estimated.

"If, again, though usually better in summer than in winter, he was formerly oppressed by excessively dry heat, but enjoyed a warm and humid atmosphere, such as that of South Devon or Cornwall, the probability is that the climate of Cauterets, Eaux-Bonnes, or the Righi, during the summer, and of Torquay, Dawlish, Penzance, or Jersey, of Pau, Rome, the Azores, Madeira, Santa Cruz, the Mauritius, or Ceylon, during the winter, according to the degree of temperature required, would be found to suit his general health, and assist in subduing the irritability of the air-passages.

"And yet again, if he is constitutionally disposed to general languor, and has not only felt depressed and enervated by heat, but pinched and prostrated by cold, then, notwithstanding the irritability of his bronchial mucous membrane, a medium climate must be sought—a climate such as is to be found in Queenstown and other parts of the coast of Ireland, on the western coast of Scotland, at Cheltenham, St. Leonards, Ventnor, and Bournmouth; or, if a higher range of temperature is necessary, at Hyères, Pisa, Montreaux, or Malaga, on in New Zealand, Brisbane, or the Cape of Good Hope.

"But a large class of consumptive patients exist in whom there is little or no irritability of the mucous membrane. In these a more bracing air will generally prove of the greatest benefit; but nevertheless, as in the former cases, the selection of a locality in each particular instance must be regulated by the constitutional peculiarities of the invalid. If his circulation is languid, and he has usually felt more vigorous in summer than in winter, the invalid must repair to a warm locality; and in such a case the climate of Mentone, St. Remo, Cannes, Malta, Nubia, Algeria, Upper Egypt, the northern districts of Syria, and New South Wales, are likely to prove extremely beneficial. In some such cases the air of the villages high up the peak of Teneriffe, the Himalayas, the more elevated parts of the Andes, and other hill districts, has been found remarkably serviceable. Indeed, there is abundant evidence to prove that on the elevated slopes of the Andes and in the higher regions of the Peruvian Cordillera phthisis is almost unknown, and consumptive invalids who take up their abode here, in most cases, make good recoveries.

"If, again, the patient has an active circulation, and has usually enjoyed better health in winter than in summer, feeling braced and invigorated by cold, he will probably derive benefit from a residence at Brighton, Margate, Aldborough, Cromer, Harrogate, or Malvern; if a warmer air is needed, at Nice or Florence; or if a cooler and still keener air is required, in Montreal, or other places in Canada, or in certain dry localities in Norway, Russia, or other northern countries. In these cases, too, the

stimulating effect of the air at high ranges above the sea-level is oftentimes productive of extraordinary beneficial results. Some of the most remarkable recoveries from consumption which have come within my own cognizance, have occurred under the bracing influence of a northern clime and the diminished barometric pressure which obtains at considerable altitudes above the sea-level."

We have already quoted Dr. Fuller's testimony as to the value of pancreatic emulsion; when neither it nor cod-liver oil agrees with the stomach he is in the habit of giving sugar in the form of eau sucré to the extent of a pound daily. Contrary to the practice which we have always followed, he advises cod-liver oil to be continued during hemoptysis and intercurrent inflammatory attacks, in combination with the remedies which they may require; these complications are due, he says, to the unhealthy condition of the nutrient fluid, and the sooner this is corrected by the oil the better. With the following quotation on the subjects of baths, we must conclude our notice of his excellent work:—

"The use of baths, whether warm, tepid, or cold, vapour or hot air, is too much neglected in the treatment of consumption. This has arisen, I believe, partly from the difficulty which, until the last few years, has been experienced in obtaining baths in this country, and partly from the mischief which has frequently resulted from their improper or injudicious employment. It is not to be doubted that agents like baths must exert a powerful influence on the animal economy. Theory suggests the fact, and experience confirms it. But their agency will be for good or for evil, according as they are judiciously or injudiciously made use of. The cold shower bath will stimulate and brace one patient, but will chill and depress another; the warm bath will soothe and tranquillize one person, but enervate and render another miserable; the vapour or the hot-air bath will refresh the man whose skin is dry and inactive, and whose nervous system is oppressed or rendered irritable by the presence in the blood of materials which ought to have been thrown off by perspiration, whilst it would exhaust and reduce to an unwarrantable degree the patient whose skin is already relaxed and acting immoderately. Thus, it may be affirmed of baths as of other agents, that they become remedies only when they are adapted to the requirements of the case. But it may be added, that when so employed they are valuable adjuncts to other treatment, and ought never to be neglected. I have seen more striking benefit result from the cold shower bath and the dripping sheet, followed by active friction, or from the hot-air bath, followed by a cold douche or a cold

shower bath, than from any other remedy, except cod-liver oil. The patient, if cold and chilly, is warmed by the hot-air bath to a degree which cannot be produced by any other agency, while the cold water braces the nervous system, and renders the skin less susceptible of draughts and of sudden variations of temperature. Sponging the body with cold or tepid vinegar and water is sometimes very serviceable."

# PART III.

# MEDICAL MISCELLANY.

*Reports, Retrospects, and Scientific Intelligence.*

## TRANSACTIONS OF THE MEDICAL SOCIETY OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS.

*A Case of Ascending and Descending Breathing, with a prolonged Stage of Apnea, with Fatty Degeneration of the Diaphragm, but not of the Heart.* By Henry H. Head, M.D., F.K. & Q.C.P., and Physician to the Adelaide Hospital.

In January last I exhibited to the Pathological Society the heart and large vessels of a man, who died in the Adelaide Hospital, for the purpose of placing on record the history of a case in which that form of breathing existed in a marked degree, where the rhythm consists of an ascending and descending series with a prolonged stage of apnea, without fatty degeneration or other weakened condition of the heart.

The *post-mortem* was made a short time before the meeting, and the condition of the heart had alone been investigated. Subsequent observations led to the discovery that there was extensive fatty degeneration of the diaphragm, and I thought the case worthy of more consideration, and that the details might be interesting to the Medical Society.

Signor R——, married, aged fifty-five, was admitted into the Adelaide Hospital on the 12th November, '66. He was a large, strong-built man, with good muscular development, was rather fat, but not to an inordinate degree. He stated that he had served in the Tuscan army for six years, and had been obliged to leave Italy, in '48, for political reasons. Since that time he had suffered from great anxiety, and had undergone many hardships.

His habits had always been temperate, he had never been addicted to smoking, had never suffered from rheumatism, nor had he ever had venereal. His health had been moderately good, and he was not conscious of having suffered from any chest or cardiac affection until within the last year, since which time he had occasionally had attacks of

palpitation and difficulty of breathing on making any undue exertion. A short time before his admission into hospital, his symptoms became greatly aggravated, and he observed some swelling in his feet. When admitted he complained of difficulty of breathing, he could not lie flat on his bed, and was obliged continually to maintain a sitting position. The heart's action was strong, and a pulsation in all the superficial arteries was distinctly visible. The appetite was good, the tongue furred, bowels confined. The urine was scanty and high coloured, its s. g. 1024, and it contained a small quantity of albumen. On examination there was found to be an increased dulness over the region of the heart, extending from the third rib to the sixth intercostal space, and from the right of the sternum to a considerable distance beyond the left mamma. The impulse of the heart was strong, and could be felt over a much larger space than was natural. On examination with the stethoscope a double murmur was heard at the apex of the heart, which became more distinct as you approached the base; the second sound was not perceptible, but was replaced by a murmur. The bruit accompanying the first sound was traceable along the course of the aorta as high up as the vessels of the neck. The pulse was seventy-six, strong, but sudden and abrupt, and yielded immediately after the first impulse. There was a distinct vibratory thrill in the larger vessels, particularly perceptible at the commencement of the carotid and subclavian arteries. The lungs did not exhibit any physical sign of disease. During the paroxysms of difficult breathing the respiratory sounds were loud and puerile; there was little cough, and very scanty expectoration. The diagnosis was permanent patency of the aortic valves, and hypertrophy of the left heart. Under treatment his condition at first considerably improved, and the swelling of the feet disappeared, but the relief was only temporary; after a short time the symptoms became greatly aggravated. The swelling in the limbs returned, and the distress of breathing was much increased. It was then observed that the respiration presented the character of an ascending and descending series with an interval of apnea. These phenomena were not constant, but after a time became much more distinct. During the height of the paroxysm the efforts were most violent, bringing into strong action all the respiratory muscles, more particularly those of the thorax. The rhythm lasted about one minute and a quarter, the periods of ascent and descent being nearly equal, and the apnea sometimes lasting thirty-five seconds. The case went on with little change, except a gradual increase in the severity of the symptoms, until the end of January; the treatment adopted afforded little relief; at times the sufferings were extreme, and very little sleep could be obtained. On several occasions it was endeavoured to be ascertained whether the peculiarity of breathing existed during sleep, but no satisfactory observation could be obtained on account of the patient's extreme wakefulness. The

anasarca increased very much, and extended to the cellular tissue of the body. On getting out of bed the patient met with a slight accident which injured the skin on one of his legs. He was attacked by erysipelas, which gradually extended to the trunk, and the limb became gangrenous, in consequence of which he died.

The body was examined eighteen hours after death. On opening the thorax the lungs collapsed slightly, but did not present any appearance of disease. The heart was much enlarged and elongated, lying nearly transversely in the chest. On opening the pericardium, there was a small amount of fluid, and the heart was covered with rather more fat than usual. The cavities were distended with blood, and there was a loose fibrinous clot in the right auricle and ventricle, which was not adherent or in any way attached to the sides of the cavities. The aorta was dilated, and the coats contained an extensive atheromatous and osseous deposit; the aortic opening was surrounded by a bony ring. The semilunar valves were thickened and contracted, and were quite incompetent, permitting water to pass freely into the ventricle. The walls of the left ventricle were much hypertrophied, and the cavity slightly dilated. The mitral valve and opening were perfectly healthy. The right ventricle did not present any abnormal appearance, with the exception of, perhaps, a slight degree of dilatation. The auricular ventricular opening was a little larger than usual, but the tricuspid valve normal and competent. The muscular structure of the heart was firm, natural in colour, and did not present, under the microscope, any sign of interstitial deposit of fat or fatty degeneration of its structure. Careful chemical examination led to the same result. The intercostal muscles and general muscular structure of the body appeared natural, but were not specially examined. The diaphragm was of a pale yellow colour, soft and easily torn, and, under the microscope, exhibited both interstitial deposit of fat and also fatty degeneration of the muscular fibre. An independent examination was made by my friend, Dr. Macallister, who, without having seen the case, or having formed any preconceived idea on the subject, gave me the following results of his examination:—"The portion of the diaphragm submitted to me was a little thicker than usual, soft, easily torn, and pale yellowish-brown in colour; fat cells existed in abundance in the intermuscular cellular tissue, and the muscle fibre seemed degenerated with strings of fat globules enclosed in the myolema. It left a greasy mark on soft paper and likewise on the knife." The abdominal viscera were not examined with any great care. The liver appeared natural as to structure, but was slightly enlarged. The spleen was about three times its usual size, but its structure was apparently not much altered. The kidneys were very vascular, but did not exhibit any sign of degeneration. No examination was made of the nervous centres, as they did not show any symptoms of disease during life.

It has always been considered by pathologists a difficult matter to explain the cause of this form of breathing. That it is not always due to a weak condition of the heart retaining the blood until a sufficient accumulation has taken place to excite reflex action, may be inferred from the fact that the pulse was as strong during the apnea as during the respirations in this case, as the sphygmograms taken by my friend, Dr. Grimshaw clearly show; and in a case of a similar kind, now in hospital under the care of my colleague, Dr. Little, the sphygmograph shows a stronger pulse during the apnea. There cannot be a doubt that this form of breathing is most frequently associated with fatty degeneration of the heart, but it is equally true that it has been observed when no such lesion existed. Dr. Walsh, in the last edition of his book, says:—"It probably lies beyond the powers of existing physiology to explain satisfactorily the mechanism of this apnea;" and expresses an opinion that its cause exists in failure of nervous power due to disease in either the vagus or medulla oblongata.

While this case was under observation it was considered probable that fatty degeneration of the right side of the heart existed, although there was evident hypertrophy of the left. The fact of degenerated diaphragm was not suspected until the *post-mortem* examination. And I was not aware that any case of the kind had been recorded, until my friend, Dr. Walter Smyth referred me to Dr. Callender's report of six cases in *The Lancet* of the 12th January last. They were for the most part associated with fatty heart, but he does not mention any particulars connected with the breathing, except that it was in some instances irregular, and that patients all died of rapid sinking, with failure of the respiratory powers. It would not of course be philosophical to infer from one case that this lesion of the diaphragm was the cause of the apnea; but it is worthy of the attention of those who may have the opportunity of observing future cases, and I think it affords as rational an explanation as any that has hitherto been given. I was led to examine the diaphragm when I saw that there was no degeneration of the heart; the thought suddenly occurring to me that the error might be in the muscles of respiration. The colour of the muscle attracted my attention.—*April* 17, 1867.

*On Symptoms Diagnostic of Recovery in the different Forms of Insanity.* By Marcus Eustace, L.R.C.S.I., Fellow of the College of Physicians, Ireland, &c.

Do the symptoms of recovery differ, according to the form of insanity in which they occur? and are we able to recognize them, as following a definite and distinctive course, so as to assist us in forming a correct prognosis? These are questions of the highest importance, in the present state of our knowledge of mental disease.

On careful examination of the subject, it will be found that there are such differences between the symptoms of recovery in each form; yet on reference to our highest authorities on practice of physic and mental disease we find such a recognition entirely overlooked, and yet every medical man, who has had many cases of insanity under his care, can easily recall to memory the definite and distinctive course which most cases that recovered followed; and that such cases as bore a similarity, in form of disease, had, in some degree, an analogous course to recovery; and that some of the symptoms, which at the time appeared to them most unfavourable, were in reality those that were following their true type, and by analogy with others of the same class prognosticated the first approach of recovery; while on the contrary, if the same symptoms were observed, in another form, they would denote an opposite result, and in a short time show that they had only been the precursors of an advance of disease.

In illustration I bring before you the case of a gentleman who was under our care some years ago. It was easy from the first to diagnose his case as one of general paralysis; he had the mental exaltation, the tottering gait, difficulty of utterance, and general tremors, particularly of one side; he thought his powers unlimited; his mind was entirely absorbed in passing in review his unbounded wealth, being unable to control its fancies even for a short time; he raved like one talking in his sleep. This state continued for nearly two years, little change taking place, with the exception of a slight increase of paralysis, when one day my brother was hastily sent for, by his attendant, who, trembling with emotion, told him that suddenly, and without any observable premonitory change, Mr. A. had quite recovered his mind, and had expressed a desire to see him.

On my brother going to him he found him calm, and perfectly in his right mind, but with a decided increase of paralysis on one side. Mr. A. asked how long he was in the establishment, expressed himself quite unconscious of the events of the past two years, with the exception of remembering his raving, and its topics.

He recognized one of the attendants, and requested he might remain with him, in case he should relapse into his former state. Having made some other correct arrangements, his mind appeared quite at ease. Everything was done to reassure him, and keep up this state of mind, which continued for more than two hours; then gradually the former imaginary visions began again to pass before his mind, the former sad raving recommenced, and from that time until his death, which took place six months after, not a trace of intelligence manifested itself.

All that we could conjecture from this remarkable lucid interval was, that the portion of the brain, which was undergoing inflammation of that low and circumscribed form, so often attacking nerve fibre, by its

irritation, gave rise to the exalted delirium and tremors, with slight general paralysis. That the continuance of the inflammatory process had caused destruction of nerve cell, and consequent softening of nerve fibre, which had given way, causing the increase of paralysis, and by its solution of continuity had stopped the cause of irritation, and permitted the mind to act normally. As in cases of gangrene, when the part dies there is temporary cessation of irritation; but as in this case, so soon as the inflammatory process advances to the adjacent structures, irritation is again lighted up.

What an error it would have been, on being called on to see such a case during the lucid interval, to have pronounced such a change as the precursor of recovery, while on the contrary, if such a mental change had taken place in some of the other forms of insanity, it would have been right to pronounce that recovery was at hand, and by judicious treatment would soon be established.

As in acute mania, followed by collapse, from which the patient sometimes arouses perfectly sane, and in some cases without collapse, apparently as if awaking from a dream.

A short time since we met a most interesting case in which this took place, and which has so much bearing on the opposite side of the question that I may be permitted to enter more fully into its details.

A young lady had an attack of acute mania, accompanied with violence and incoherence.

A week after the commencement of the attack she was placed under the care of an experienced woman, who took insane ladies into her house. After three months had elapsed, there being no decided change for the better, she was removed to Hampstead House, an evident case of mania, which after a month changed to almost complete apathy, with slight symptoms of catalepsy. The patient was apparently unaware of the calls of nature, passing everything under her. Her eyes were fixed—she allowed food to remain in her mouth, making no exertion to swallow. If undisturbed, she would remain in the same attitude throughout the day. When placed in bed, she would remain in the same position until removed. So profound was the collapse, that she was supported by enemata of beef-tea, &c., and the introduction of fluids, through the nose, with a syringe. She remained in this state for about three weeks, when one day, rising from the sofa on which she had been lying, she took a chair, and drew it to the fire, asking her attendant how long she had been ill. From that time she continued well, until, seven years after, in consequence of the death of her father, to whom she had been much attached, another attack of acute mania came on. She was conscious of her state, and at once placed herself under our care. The second attack was characterized by the same violence as the preceding one, for eight months, when a similar state of mental collapse followed, it being necessary for a short time

to feed through the nose. The symptoms of catalepsy were more decided than during the former attack. If her arm was raised and placed in any position, it would remain so for hours. In the same manner as on the former occasion, one day, quite unexpectedly, she rose up from the couch on which she had been lying, said she was quite well, and that the attack had passed off the same as before. She was so prostrated that it was with difficulty she walked without assistance. She was slow in recovering her bodily strength, but from that day her mind has remained perfectly well, now about two years.

Now, in this case, as in many of the same type, we were justified in pronouncing such a change from excitement to the opposite state, and followed by a sudden return of reason as denoting recovery close at hand; and if we are able to lay down, as a rule, that there are forms of insanity in which we cannot rely on a sudden change to rationality as a favourable symptom, while there are others of a different type in which we can, I believe we open up a field of inquiry which would place our too often hazardous prognosis and treatment on a firmer basis, and not allow us to fall into the error which even one of our most eminent psychologists has done, in not recognizing the changes to recovery, and by uncalled for interference bring on complications, thereby retarding improvement, as in a case given by Esquirol, and in which, in consequence of his not recognizing the change from mania to apathy, simulating dementia, as a most favourable symptom, and the precursor of recovery, he fell into the grave error of adopting such treatment as brought on a recurrence of the maniacal symptoms.

The patient, when twenty years of age, had for three months violent pain in the head. She suffered from insomnia for four days, and afterwards from delirium. She was brought to the Salpétrière in a state of mania, which lasted for nearly two months. The patient then sank into a state of complete dementia; she appeared insensible to everything that was passing around her—did not change her place—never spoke—not even in reply to questions addressed to her. This state continued for two months, when Esquirol applied the actual cautery to the neck. This provoked a general irritation, and a maniacal delirium, which lasted for several days.

In giving the case of general paralysis it may be replied to me, that in that case there was an incurable and slowly destructive bodily disease, and that no one would pronounce recovery possible; even so, accepting it in this way we are enabled to separate this from other forms of insanity, and to assert that what is favourable in the one is highly unfavourable in the other; but there are other forms of mental disease, unaccompanied with paralysis, which, I believe, on close examination, would show that the same symptom, of sudden return to rationality, would not bear a favourable prognosis. For instance, in chronic mania, during the height

of a furious outburst there is a sudden change to perfect rationality, succeeded, in a short time, by a recurrence of the former excitement, the important stage of collapse, which is so often the precursor of recovery in acute mania, not having been reached.

If we take into consideration changes of delusion we will find that some are favourable while others are decidedly unfavourable, for, in religious melancholy, with suicidal desire, when the religious delusions change their form, and from predisposition to suicide there is a change to the opposite—to the state of beatitude, in which the patient has free communication with heaven, &c., experience will teach us that this is a most favourable change, and often followed by recovery. In illustration I may give the case of a young lady affected with religious melancholy, who, having escaped from her friends at night, was taken by the police on the banks of the canal, which she had reached for the purpose of throwing herself in. She was then placed under our care, and for some time manifested extreme religious despondency, which gave way, changing to the opposite extreme, and when in a state of ecstasy she believed she held direct communication with heavenly beings; this state was soon followed by a more moderate tone and complete recovery, which has continued for several years. On the contrary—this being a case of suicidal insanity—if the change had been to homicidal desire we could not consider the change a favourable one.

I do not mean to say that all cases, according to their type, follow out a definite course of recovery, because they are often mixed with other forms, but I do consider that such cases as represent most truly the type of insanity to which they belong have wide differences in the symptoms that denote recovery, and that the diagnostic value of those symptoms can alone be arrived at by keeping in view the form of insanity in which they occur.

As another large class of cases which have their own special form of recovery, I may instance those which follow great physical prostration from a temporary cause, which, though removed, has lowered the bodily strength, and is followed by febrile exacerbations and mental excitement. Now, in such cases, you may watch with interest the phenomena that as the bodily health improves, so the mind, in its contest for supremacy, at first will feebly, and for a short time, manifest its returning power of control, followed by even increased excitement; but as strength returns, so the interval of improvement is lengthened, until gradually recovery is established. In such cases I think our judgment as to probable recovery can be much assisted by a careful examination of the intervals of excitement; and by accurately comparing them with former ones, so as to ascertain, as strength returns, whether they are more defined, or of longer duration, denoting the course to recovery, while, on the contrary, if the intervals become less marked, and there is a gradual blending down of the extremes, dementia is likely to follow.

Therefore, I submit, there are those differences in symptoms of recovery, according to the type of insanity; and yet, if we examine well-known authors we find that very few of them have taken notice of this most important subject—symptoms prognostic of recovery—and that those who have, have thrown aside the classification of insanity as affording no assistance, with the exception of its statistical value, that more recoveries take place in one form than in another; but as to the manner of recovery, it is a subject of so much doubt and perplexity that they can only point out such favourable symptoms as are applicable to all forms alike, necessarily limiting their remarks to a very cursory view of the subject. For instance, in Bucknill and Tuke's able work on *Psychological Medicine*, which has recently passed through a second edition, and which is the most exact and precise work on insanity we have, going carefully into its history, classification, description of each form of disease, diagnosis, prognosis, and treatment; yet they have not given ten lines to the symptoms that accompany and precede recovery, distinguishing and comparing their value according to the form in which they occur.

Again, in Wood's *Practice of Physic*, having occupied much space with diagnosis and treatment, and an admirable description of each form of insanity, he concludes the article on Mania with a few remarks on symptoms of recovery as follows:—"These remarks in reference to the cure of mania apply also to the other varieties"—plainly showing that, in his opinion, there is no symptom of recovery more applicable to mania than to any other form. Again, in Borrowes' *Commentaries on Insanity*, he recognizes the value of close observation and of the careful study of the first symptoms of improvement, as in speaking of all forms alike, he says:—"It will readily be conceived of what importance it is to recovery that these incipient signs of waking from a long night should be most attentively regarded and cherished; should they be repulsed by neglect or ignorance the mind may again be plunged into that disorder whence it is making feeble but sure efforts, if encouraged, to emerge." But in treating of the disease in its separate forms, he points out no distinctive outline to assist our treatment; for instance, in speaking of puerperal insanity, he curtly remarks that when the symptoms of cerebral excitement subside, the exhibition of mild tonics is advantageous. Now, this is one of the most curable forms of mental disease, and yet, according to Borrowes, its progress to cure does not need a separate description.

Neither Connoly nor Forbes Winslow, in their many valuable works on mental disease, have alluded to the distinctive symptoms that denote recovery in each form, nor am I aware of any writer on insanity who points out such a distinction.

A recognition of the various types of insanity can be traced from the earliest ages. The Roman law divided insanity into two classes—furiosi

and mente capti. Hippocrates is considered to divide it into three forms. Celsus also divides it into three, on a different basis from Hippocrates; and although many classifications follow, many of them most complex, we have to come to the time of Pinel and Esquirol, before we have one of easy and universal application; although I believe it holds the position of universal application to every case of insanity, yet as research and inquiry into mental disease place its study on a firmer basis, we require a classification more adapted to our present knowledge; and suggestive of a further advance in this position, we hail, with pleasure, the admirable one laid before the profession by Doctors Bucknill and Tuke, as follows:—

1. Idiotcy,
2. Dementia,
3. Delusional insanity,
4. Emotional insanity,
5. Mania,

With their complications of paralysis or epilepsy.

Now, we are generally able to place each case of insanity under one or other of these heads; and if so, we have taken the first step towards a correct prognosis. No doubt, in some cases, a change will take place from one form to another, but we must look on such a change as an accidental circumstance, being a complication, and as in other forms of disease, showing the necessity of being prepared for unexpected complications; but I consider this an accidental occurrence, and that we are in no way bound to pronounce that it is the normal course of the disease. In other cases circumstances sometimes occur that are so prejudicial to recovery as to compel a complication such as a change from one type of insanity to another; thus in the case of a gentleman who, with humour and energy, related to me the circumstances of his being placed in a private asylum while labouring under religious monomania, and having sunk into a state similar to that of trance, lying motionless, with his eyes fixed, the superintendent of the institution, who was a non-medical gentleman, but who aspired to the honour of treating the insane by medical means, one day having a strait-waistcoat placed on him as a precautionary measure, had him placed on a sofa, and believing the strait-waistcoat sufficiently strong, dismissed the attendant, and then unexpectedly, so as to take the patient by surprise, commenced a series of shocks from a galvanic battery; for a time the patient resisted the thrilling effects, but soon made up his mind that the devil was personified on earth in the person of his tormentor, and that it was his duty to slay him. Springing from the sofa he kicked the table over on which the battery was placed, burst the strait-waistcoat, as if it was rotten, rushed on the superintendent, whose cries brought several attendants; after a struggle, they

succeeded in mastering him, but from that day out for years, his insanity changed its form into that of homicidal; he made several attempts on the lives of the superintendent and attendants. The patient's account of this affair was afterwards confirmed to me by the superintendent.

He has now been under our care for several years, and has frequently exhibited a homicidal tendency.

Again, the indulgence in intoxicating liquors to excess will often change the type of the disease, as in the case of a gentleman, who was under our care, and who was a decided case of delusional insanity, believing in a conspiracy against him, he was brought before a jury under a commission of lunacy; the jury returned a verdict of sanity; being restored to liberty, he at once gave way to every excess, and within six weeks had a violent attack of mania, the precursor of general paralysis, of which he died.

I will now briefly lay before you, according to the foregoing classification, some of those symptoms which denote improvement, commencing with the first form, that of idiotcy, now all but removed from the hopeless and incurable. In it we consider the first symptom of improvement to be an increased power of attention which fixes the passing idea, and after a time brings about memory; next you have the power of comparing objects revived by memory with those present, thereby producing complex ideas. Now, in a case of idiotcy, uncomplicated with physical disease, if we keep these changes before our view we can without difficulty ascertain what amount of progress has been made, and by fair inference, what may yet be attained.

We have next dementia, which we must divide into acute and chronic. Taking acute dementia first, we find a disease lower in the scale than that of partial idiotcy. In partial idiotcy ideas appear to be originated; but as fast as they are formed they pass out of the mind, leaving no trace. In acute dementia the power of originating ideas appears to be lost, and physical life is uninfluenced by mental action, being reduced to a state akin to vegetable existence. Now the gradual changes from this low position can be traced from the first gleam of thought, often momentarily lighting up the countenance, soon to relapse into its former vacancy; if we apply stimulants to the various senses we may find one of them easily affected, and this gleam of returning intelligence brought about. Thus, in the case of a gentleman, suffering from acute dementia, who was placed under our care some years ago, so profound was the loss of mental power, that he could not be roused by ordinary means, even to swallow his saliva, but remained with his eyes fixed, his mouth open, and the saliva flowing freely down his chest; food being placed in his mouth remained unswallowed. Having tried various means of rousing his attention, which failed, music was accidentally introduced; immediately a gleam of intelligence passed over his face, and soon he was able to drink a tumbler of porter that was near him; without assistance he took

the knife and fork and fed himself: but if the music ceased that moment he would lay them down and relapse into his former state; at this time he had had no food for three days. For some time music was had recourse to during his meals; he gradually roused out of this state, and after a few months was perfectly restored, remaining well for the last fifteen years. Now, in cases of acute dementia, when we can by slight causes bring about this apparent return of intelligence, not followed by excitement, I consider it a most favourable sign. Again, if we find a gradual but slow progress towards recovery, manifested by a steady restoration of general health, with an absence of any occasional incoherence, we may be satisfied all is doing well.

On the contrary, as the general health improves, if we have slight attacks of excitement occasionally repeated, evidenced by brightness of the eyes and sleeplessness, we have to fear a downward course, ending in chronic dementia, from which recovery almost never takes place after it has continued any length of time. All forms of insanity are liable to this result, but such cases of chronic dementia as do recover, I think it can be laid down that the majority of them trace back many of the original downward steps before improvement sets in.

Delusional insanity comes next, and comprises so many subdivisions that I shall only point out such changes as may equally apply to all, hoping that the day may yet come when, by continued research, distinctive symptoms can be pointed out as accompanying each sub-class.

As improvement takes place in delusional insanity we usually find less anxiety to talk on such delusions as held the least prominent position. After a time there comes about an unwillingness to allude to them, although the most prominent may still hold its sway, but it, in its turn, will yield, and often a feeling of shame will make any allusion to it unpleasant. We must also consider any decided change of delusion in most cases a favourable symptom, provided it is not the result of false sensation, due to organic disease of the brain, or other organ, such as we often meet in disease of the stomach or heart, or from arrested disease of the brain.

Where the mind is affected by loss of control of emotion, so as to interfere with its normal action, such cases come under the head of emotional insanity—the fourth in our classification, and divided into moral insanity, mania, with suicidal and homicidal impulse, &c., and melancholia without delusion; for our present purpose we will also include mania, acute and chronic, in which the emotions are so much affected as to permit our placing them together for consideration.

To form a just estimate of symptoms of recovery in so large a class, embracing so many disordered emotional propensities, we may lay down, as the first necessary step, a complete acquaintance with the previous history, and a knowledge of what amount of hereditary influence bears

upon the case; we then consider are they approaching what they were previous to any mental affection, do they recognize these undue emotions as arising contrary to their own better desire, and what amount of control are they conscious of gaining over them, what length of time has elapsed since these abhorred emotions last presented themselves, and whether that interval has increased in comparison with former periods; and when they last appeared did they come with as much force, or were they brought about by as slight a cause? These considerations more particularly apply to those forms of emotional insanity, unaccompanied with raving, such as moral insanity, suicidal and homicidal impulse. Those accompanied with raving require separate consideration.

In acute mania it is not until the disease has passed its height that we are able to place any confidence in whatever favourable change may take place. Then, in many cases, if we attentively watch that peculiar collapse of mental power which I consider distinct from dementia, in the commencement of which, and often all through, we are able, by taking too much notice of the patient, to bring on raving again, but when we find dementia setting in, our presence becomes less and less recognized. Now when we find this peculiar collapse follow an attack of mania, I believe it is a favourable symptom, and that the patient (as in the case I have already cited) may sometimes arouse into perfect sanity.

Some cases take on an intermittent type, having an exacerbation every third or fourth day; in such cases we must compare the duration of the interval, and if the interval is increasing, although the attacks may be more severe, I consider the case is progressing favourably.

As to the recurrent form of mania having an interval, in some cases of years, in others of but a few months; in many such cases, if we carefully examine them during the height of the attack, or as it declines, we often find it accompanied by difficulty of utterance, or strabismus, or a remarkable gait, or some slight and temporary lesion of volition.

I have thus endeavoured to place before you some of the leading distinctive symptoms of recovery accompanying the different forms of insanity; in doing so I have only mentioned the most prominent. I feel sure there are many more that, by careful observation, we will find, hold as valuable a position in assisting our prognosis and treatment. In reciting the various cases I have placed before you, I do not put them forward as in themselves conclusive, but in illustration of my views on the subject.

It may be thought by some that I have placed too much value on the mental symptomatology of this disease; but when we consider that all authorities agree that its forms admit of a distinct classification, such classification being founded upon the mental symptoms, and that by it we arrive at statistical results, which pronounce one form more curable tha another, I in due course maintain that such cases as are uncomplicated follow a distinct course to recovery.

## PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF DUBLIN.[a]

Dr. R. W. Smith, President.

*Phlebitis of the Portal Vein.*—Dr. Gordon exhibited a specimen of suppurative inflammation of the portal vein, and gave the following account of the case:—

John Byrne, aged thirty-eight, a porter, was admitted into the Whitworth Hospital on the 27th of October, 1866. He is a sallow, emaciated looking man, in a very prostrate condition, talks slowly, and in a low tone. There is considerable tumefaction of the liver; it fills up the epigastric region, and extends down to the umbilicus. There is no well-defined tumour, nor perceptible enlargement of either lobe in particular, but general increase of size of the entire organ, with a prominent bulging forward of the right lobe. To this situation the patient refers all his pain, which he describes as intense, dull, aching. The pain is increased very much by pressure. There is a peculiar hardness and tension of the abdominal muscles on the right side, which contrasts remarkably with the flaccid condition of those of the opposite, and there is dulness on percussion over the right side of the chest, as high as the fifth rib; there is no disease of the right lung or pleura; the respiration is slow; pulse 96. He has some diarrhea, the dejecta being of a greyish-brown colour.

The patient states that some time ago he received a severe blow in the right side from some moving machinery, and that since then he never felt quite well. About five weeks ago he began to suffer from headache, sick stomach, and pain in the epigastric region, and has since then been rapidly emaciating and losing strength; he has also latterly had repeated fits of shivering.

This man was exactly one month in hospital; he died on the 27th of November, and the daily record of his sufferings may be briefly summed up as follows:—He shivered at irregular times, but on an average every third day; this shivering was followed by a profuse cold perspiration, and then by a still colder stage which left him in an increasingly profound state of weakness; he gradually lost all appetite for food, and had hiccough, vomiting, and a constant feeling of nausea. He slept well by means of opium, but when he was awake he was always in pain, and he could only lie on his back, sometimes inclined a little to the left side; he had occasionally diarrhea, and the stools became eventually almost white. The urine became very scanty and loaded with an enormous amount of lithates.

[a] These reports are furnished by the Secretary to the Society.

Emaciation rapidly progressed. The patient was attacked with a form of intermittent vomiting; one day it was so severe and constant that he could not retain a particle of nourishment, solid or fluid: then it ceased for two or three days, and he was able to take food comparatively freely; but at length he wasted away, became comatose, and died. He was never jaundiced, but was of a very light lemon colour.

There was but little change in the local symptoms; the projection in the right lobe of the liver became more prominent, and fluctuation was distinct, and the seat of tenderness became more extensive, extending over the entire organ.

*Post-mortem Examination.*—Notwithstanding the insertion of a deep caustic issue over the tumour no adhesion had taken place between the layers of the peritoneum; an adhesive peritonitis, to a very slight extent, was forming between the under surface of the liver, and two spots of small intestine. With this exception the diseased appearances were confined to the liver. A very careful examination failed to detect any ulceration in any part of the gastro-intestinal mucous membrane.

The liver was very large, of a very pale colour; smooth on the surface, except where an abscess in the right lobe was projecting; it was near the surface, was filled with thick creamy pus, and could have contained a small hen-egg.

Sections of the liver showed that both lobes were occupied by numerous small abscesses, not less than twenty in number; they were very irregular in their shape and outline, on an average about the diameter of a shilling, some larger and some smaller; their contents were all alike, and all the same as the matter found in the projecting abscess. Many of them were most characteristic of the phlebitic abscesses found after amputations, or in the other forms of diffuse inflammation.

And an accurate examination was made of the remainder of the body, but no purulent collection or any other appearance indicative of phlebitis could be found except in the liver. I am indebted to Dr. Foot for the following minute examination of that organ, which he undertook to follow up for me:—

The primary divisions of the portal vein were inflamed, their coats thickened; laminated coagula, like lymphy cylinders, lining their interior, and diminishing their calibre; the subjacent lining membrane of the vein stained from imbibition of the colouring matter of the blood; there was purulent matter in all the ramifications of the portal vein, at some places of a pure yellow colour, and apparently homogenous and laudable, in others stained of an orange colour from bile; the thickening and other signs of inflammation were confined to the two large primary divisions of the vessel. In none of the branches or tributaries of the hepatic vein was there any purulent deposit or alteration from natural conditions. Parts of the texture of the liver, especially of the right lobe, were like a sponge

soaked in pus from the number of abscesses of minute size occupying the terminal stages of the portal veins.

The origin of the disease evidently was a thrombus in the portal vein, which irritated, by its presence, the walls of the vessel, leaving in consequence the appearances found. This thrombus eventually became disintegrated by purulent metamorphosis, and occasioned metastatic deposits; for such cases there are precedents given by Frerichs, Vol. ii., *Diseases of Portal Vein.—December* 1, 1866.

*Excessive Distension of the Intestines in Typhoid Fever.*—Dr. Lyons stated that the specimen which he had to present to the Society was taken from the body of a man who died of typhoid fever under circumstances which, according to his experience, were rather unusual. He was admitted into hospital about the fifth or sixth week of his illness; and looking back at the history of his case, it would appear that he was labouring under that form of the disease in which the fever in the first instance is comparatively insignificant, and in which the lesion in the intestinal tract is not brought into activity till several weeks after the commencement of the primary fever.

When admitted into hospital he laboured under great depression, and, without entering into minute details, it may be stated that the principal phenomenon of the case at this period was intense pain in the lower half of the abdomen, and enormous distension of the whole abdominal cavity. He was placed under appropriate treatment, but he died rather unexpectedly; and having in view what occurred in two previous instances which came under his observation, it appeared to Dr. Lyons to be worth while to make a *post-mortem* examination, to determine whether, under similar circumstances, it would be possible to afford mechanical relief from without. With this view Dr. Lyons performed an operation which had for its object to get access to the cecum at that portion which is usually uncovered by the peritoneum. He failed, for reasons presently to be noticed, to reach the cecum, and on reaching the abdominal cavity there was a forcible escape of highly noxious gas; on proceeding further with the *post-mortem* examination it was found that the intestines were most enormously distended. The colon was of great size; and the smaller intestines were also immensely dilated, and had forced up the colon before them to a great height, and so carried the cecum from its natural situation, so that it lay several inches above the point at which ordinarily it would be expected to be found. This, Dr. Lyons observed, is an operation which has not been performed, so far as he was aware, with the view of relieving unnatural distension in the human subject, but in the lower animals relief is not unfrequently given by operation from without. The case reminded him of two of a somewhat similar kind, one in which a female was taking daily, for six months, a large quantity of alum, with

the view of preventing excessive hemorrhage when she should next be confined. In that instance the abdomen reached an amount of distension that it was almost impossible to conceive, but the patient ultimately recovered. The next case of extreme intestinal distension which he had met was that of a man, who, after being under treatment for a fortnight, suddenly turned to the wall, and shot from his mouth a vast quantity of semifecal matter which almost reached to the ceiling in the room where he was, and he died on the spot. Dr. Lyons stated that he had no doubt death ensued in this case from rupture of the intestines. In this instance the intestines were distended to an enormous degree, but there was no *post-mortem* examination allowed.

In the case immediately before the Society the arch of the colon was of an immense size; the smaller intestines were also much distended, and there was, even during life in all probability, a large quantity of gas in the peritoneal cavity. He died rather unexpectedly. He was left on a certain day not more distressed than he was for several days previously, during which he was labouring under this extraordinary distension, and he died during the night without the accession of any new phenomenon. On examining the lower eight or ten inches of the ileon intestine, there was found a large quantity of typhoid deposit in the solitary glands, and the lower patches of Peyer were also surcharged with deposit. It is surprising that the man lived for such a lengthened period; and the case is interesting as showing that such cases will run on for a long time. The man must have been ill at least six weeks before his admission into hospital, and partly from his own statements, and partly from those of his friends, it would seem that his case was not considered serious till he was admitted into hospital.—*January* 19, 1867.

*Cancer of the Liver, &c.*—Dr. Law exhibited a specimen of cancer of the liver, and of the right pleura and lung, taken from the body of a female, aged 54. She had been engaged in active service as cook, until about four months before her death. She first began to complain of pain of the right side, just below the ribs. This pain became so severe, and her general health so much affected, that she was obliged to leave her situation, and seek admission into hospital. Having continued a month in hospital she felt so much better that she thought she might venture again to undertake a service. She soon found that she had overrated her strength, for she was soon knocked up, and was again obliged to go into hospital. The pain in the right side still continued, and her breathing had now become affected. Dr. Law could obtain no very exact information of what was done for her as to treatment while in hospital, nor what was the diagnosis of her disease. As far as he could learn, he had reason to believe it was thought to be a case of chronic pneumonia. She again left the hospital, and at the end of a month was admitted into

Sir Patrick Dun's Hospital, almost moribund; brain congested; dulness to percussion through all the anterior right chest, without a trace of respiratory murmur, or any modification of it. The heart's action was heard through all this side. Percussion was clear, and respiration distinct, in all anterior left. She was too weak to be subjected to an examination of the posterior part of the chest. The abdomen was swollen, and contained fluid. The blunt margin of the liver could be felt below the ribs, as also an unevenness of its surface. The right hand and arm, and both lower extremities were œdematous. She survived her admission into hospital very few days. *Post-mortem* examination exhibited the following appearances:—The right pleural cavity contained considerable quantity of straw-coloured serum. The entire of parietal lamina of the pleura of this side was converted into a soft encephaloid structure, varying in consistency and depth in different parts. Its greatest depth was where it lay on the diaphragm and the mediastinum, where it was nearly an inch thick. The lung, much reduced in size, was pressed against the spine; in its substance were a few firm whitish tubercles, which seemed to push aside the pulmonary structure in which they were embedded. This structure very much resembled a portion of lung in a state of atelectasis. The left lung exhibited no appearance of disease, nor did the heart. There was some, yet no considerable, amount of serous effusion into the cavity of the peritoneum. The liver was enlarged, and was studded on both its superior and inferior surfaces with whitish tubercles, varying in size, and of firm consistency, some of them as large as chestnuts. These tubercles did not present the ordinary dimpled appearance that cancerous tubercles usually exhibit. Dr. Law remarked that it was the fourth case of cancer of the lung and pleura that he had brought before the Society, and the immediate cause of death in each was pleuritic effusion, the effusion being always the same serous fluid that is found in cases of ordinary acute pleurisy. He also remarked how much more, in all the cases that had come under his observation, the pleura was affected than the pulmonary parenchyma, the disease seeming, as it were, to spare the latter by pushing it aside. This case seemed to confirm the remark of Rokitanski, that cancer of the pleura never occurs as the first in a series of cancerous deposits occurring in an individual, but is always the result of a cancerous dyscrasia that has previously developed itself in other structures.

Dr. Law had no doubt that in this case the liver was the organ first affected, as it was to its position the patient first referred her pain, and continued to do so for a considerable time. He noticed the peculiarity of the tubercles of the liver, in not presenting the dimpled appearance so constant in cancerous tubercles in this organ, and which is almost regarded as characteristic. Still the cancer existing elsewhere left no doubt that the tubercles were of the same malignant nature. Dr. Law

remarked on the obscurity that attends the diagnosis of cancer of the lung, when the disease has not developed itself in some other part, where it may be more easily recognized. Thus, for example, in one of Dr. Law's cases, the subject was a female who had had her breast removed for cancer six months previously. Her previous history furnished a clue to a suspicion of her disease. In the present case there was much room for doubt, both as to the condition of the liver and the lung. The blunt margin of the liver, and its uneven surface, with the ascites, might easily have induced the belief that it was cirrhosis of the organ—a mistake which, it may be urged, should be corrected by its being felt below the ribs, which is not usual in cirrhosis. No doubt a liver in a state of cirrhosis is not commonly felt below the ribs, but it is so sometimes, in consequence of the fluid in the peritoneum interposed between its surface and the diaphragm pressing upon it, and causing its descent. There was some difficulty, also, as to the state of the lung. There is reason to believe that it had been considered in a condition of chronic pneumonia, an opinion which the physical signs warranted. There was a universal dulness through the side, with a complete absence of respiration, and the heart's action very distinct through the side. These signs continued when she came under Dr. Law's care, still he could not recognize an exact relation between the physical signs and the constitutional symptoms, the latter not bearing a due proportion to the former. He, therefore, suspected more than mere chronic pneumonia, according to Rokitanski's canon of diagnosis in such cases, viz.—"When you do not find sufficient explanation of the symptoms in the physical signs, suspect malignant disease." The application of this rule to other similar cases had directed Dr. Law to a correct diagnosis, and therefore he applied it to the present case.—*February* 2, 1867.

*Disease of the Aortic Valves.*—Dr. Stokes said that, although the specimen which he now presented to the Society did not show any great degree of morbid change, yet the case was of importance, inasmuch as it illustrated a principle in the diagnosis of affections of the heart, viz., that we cannot always infer the amount of organic disease from the intensity or amount of the physical signs. The patient, a man somewhat over the middle age, got cold last August, and very soon afterwards became conscious of a sensation of fremitus in the region of the heart, which he very aptly compared to the purring of a cat; this remained up to the period of his death. He was admitted into the Meath Hospital some time ago, then discharged, and afterwards readmitted. The physical signs were these:—Action of the heart weak; pulse weak, but regular; it had not the collapsing character of the pulse of permanent patency of the aortic valves, but each contraction of the heart was accompanied by a loud mewing sound, which was heard from the base of the heart along

the sternum up to the region of the carotids; it was scarcely distinguishable in the carotids, but was heard loudly along the spine, even without the aid of the stethoscope; the observer, placing his ear within a few inches of the sternum, could hear it distinctly, just like a humming top. The second sound of the heart was extremely weak, so as to be barely audible; and this led to some difference of opinion, in the first instance, as to which sound this loud murmur belonged. The conclusion was finally arrived at that it was a systolic murmur, and that the aortic orifice was diseased, although not permanently patent, for there was no regurgitant murmur. From the last example he had seen in which this humming-top sound occurred, he expected to find a large amount of organic disease. He had never had an opportunity of seeing more than one example of a heart thus affected. It was the case of a gentleman, sixty years of age, in vigorous health, and going through a vast amount of important public business; and yet such was the loudness of the sound, that his colleagues at different boards of which he was a member were unable to sit at table with him, and he was requested to resign several important offices. Every beat of his heart was accompanied by this loud humming-top sound; and in this state he remained for some time, apparently in perfect health, until the period of his death arrived. In that case nothing could exceed the amount of organic disease of the aortic orifice. There was a series of bony spiculæ running down from the origin of the valves to the ventricle, giving it the appearance of a shark's mouth.

In the present case, however, the amount of organic change was but slight. The heart was very little altered. There was a slight patch of atheroma about the valves. The aortic orifice was not permanently patent; and one of the valves was slightly thickened and contracted, and a few small atheromatous deposits were seen in it.

The case showed that they must take care, in physical diagnosis, not always to estimate the amount of disease by the physical signs. The immediate cause of death was congestion of the left lung, attended with hemoptysis.—*February* 2, 1867.

*Fatty Degeneration of the Kidney.*—Dr. Finny said the morbid specimens which he now presented to the Society were taken from the body of a man, admitted eight days ago into the Meath Hospital, under the care of Dr. Stokes. He was fifty-three years of age, and had been of very intemperate habits up to twenty years ago, when he became sober. He was exposed, as a labourer, to many colds and wettings; but, with the exception of the last time, he had never suffered for more than a few days. His last illness was caused by exposure to wet and cold while attending in a sty on the accouchment of a pig for seventeen nights. He then noticed his feet began to swell. His urine changed in colour,

and became turbid and less in quantity. He experienced severe pain also in the back.

The swelling increased daily for three weeks, until, on admission, his whole body was anasarcous—hands, face, scrotum, and penis, as well as the trunk. The urine, being examined, was found to be of a deep red colour, highly albuminous, and loaded with lithates. Fifteen ounces only were passed in the twenty-four hours.

Under appropriate treatment the swelling went down considerably, and the pain in the back was relieved. However, after a few days of apparent improvement, all the symptoms returned, and he died on the 30th, after spending a most restless night. He complained of no head-ache, and had no convulsions before death. He had vomiting once only on the morning of the 30th.

The kidneys he now showed were remarkable for extensive fatty degeneration, the cortical portion seeming literally converted into fat. Dr. Finny considered these specimens worthy of being placed before the notice of the Society, not so much for their pathological interest, as being examples of an all-important organ having latently undergone degeneration to a great extent for a considerable period, without causing any inconvenience, and at last having discovered itself when too late to be remedied.—*February* 2, 1867.

*Case of Cancer of the Liver; Rupture of its Serous Covering: Compressed Heart.*—Dr. Gordon made the following communication, and exhibited the specimens:—The subject of this very rare and unusual complication was a man, aged fifty, who was admitted to the Whitworth Hospital on the 1st of January in the present year. At the time of his admission there was no difficulty in diagnosing his disease to be a cancerous enlargement of the liver, although his countenance and general appearance were by no means characteristic of malignant disease. He had been two months suffering from loss of appetite, with an uneasy sensation and feeling of weight in the right side, with slight irritability of the stomach. The hepatic region was occupied by an enlarged liver, which was also very irregular on the surface, and some of these eminences were depressed in the centre. The size of the organ at this time (1st of January), as far as could be judged by external measurement, was about one-fourth of the dimensions to which it subsequently attained. The hand could now be easily got under its inferior edge, and all the parts in the left hypochondriac region could be distinctly felt, and indeed a very accurate examination of the entire contents of the abdomen could be made with facility.

Up to the period of his admission, and for a full week afterwards, this formidable disease caused but little distress.

On the 9th of January he began to suffer from vomiting, constipation, and pain in the abdomen.

On the 11th the bowels had been freely evacuated, and the urine was secreted in normal quantity, but the irritability of the stomach continued; and from this time until his death, on the 31st, he was never altogether free from those two distressing symptoms—severe pain in the epigastric region, and either vomiting or inclination to do so.

The liver commenced now rapidly to enlarge, and almost daily there was an appreciable increase in size forwards of the irregular growth, and of the entire organ into the cavity of the abdomen.

On the 21st he began to complain of intense dragging pain in the belly, quite different from the sickening pain which he before complained of. This was doubtless caused by the rapidly induced tension of the walls of the abdomen. There was scarcely any ascitic fluid in the abdominal cavity, nor did the patient show any sign of tympanitic distress. The increased size of the abdomen was therefore referrible solely to the rapidly enlarging liver. Another symptom may be briefly noted—the rapidity with which emaciation progressed. When the patient came into hospital he was a strong man; but debility and wasting set in almost immediately.

About this time some new symptoms presented themselves—the lower half of the body became anasarcous; the urine was very deficient in quantity, and loaded with lithate of ammonia; and he began to suffer from palpitation. No disease of the heart could be detected. The liver continued to increase in size with immense rapidity.

On the 28th of January he was suddenly seized with intense pain in the abdomen; I found him in a state of complete collapse; no pulse perceptible, covered with perspiration, panting for breath, and supporting the abdomen with his hands. The heart's action could not be felt, and was scarcely audible. Remembering what sometimes occurs in these soft cancers, I thought it probable that there was in this case some extravasation of blood into some softening part, and that even a small loss of blood might have caused this complete collapse, although it would not have accounted for the pain which he was suffering.

The window opposite to him was widely opened, and the cold air freely admitted on him, and the usual restoratives were administered. In the course of some hours he recovered, and next morning he was quite restored from the state of collapse; but the pain, although by no means so excessive, never entirely left him.

On the 30th he was very weak, sinking fast. The walls of the abdomen, where he had been rubbing some iodized mercurial ointment, were becoming gangrenous. He died on the 31st. There was no jaundice at any time, but latterly he had the *jaune terreuse* hue so usual in cirrhosis of the liver.

*Post-mortem Examination.*—The enlarged liver seemed to occupy the entire abdominal cavity: when the ordinary sections of the abdomen

were made, and the walls reflected, nothing else was visible. It weighed rather more than twenty-four pounds. It had entirely lost its ordinary shape, and, when removed from the body, seemed like a large irregular ball, having numerous projections on all parts of its surface; these were cancerous tubercles, most of them having a depressed centre and corrugated margin. Sections of the liver showed that the same disease was also most extensively developed through its substance; and, when they were incised, softened cerebriform matter exuded from the centre of almost all these tumours.

The collapse of the 28th instant was caused by a rent of the peritoneum over the right lobe. It was in a perpendicular direction, three inches in extent. Adjoining the rent the serous membrane was now detached by a subserous effusion of blood. There was but a small quantity of blood in the cavity of the peritoneum; so that the collapse was, in all probability, caused as much by the actual rent as the loss of blood. This latter was to so small an extent, that it must have been immaterial but for the patient's reduced condition, and the changes which had taken place in the condition of his heart.

There was an extensive development of small cancerous tubercles through all the peritoneum, and over the pulmonary pleura, and in the lumbar glands.

The condition of the heart was very remarkable; I have never seen but one case exactly similar, and this occurred many years ago, under my own immediate observation, in the Whitworth Hospital; the case is published by Mr. Adams, in the Pathological Reports, vide *Dublin Medical Journal*, Vol. XIX., p. 322. The heart is still preserved in the Richmond Hospital Museum, and retains the shape and appearances which it then presented. In the present instance the heart was quite folded up, the ventricles, particularly the right, being quite compressed and flattened, while at the same time the wall of the ventricle was pushed inwards on itself, so that if a sharp instrument were driven through the ventricle at its external third, it would pass through the wall four times, or in four places. This condition was evidently of considerable duration, for where the ventricular walls were so compressed there was, as in the case published by Mr. Adams, a parboiled appearance, and also a gelatinous effusion, showing that they had been in contact for a long time.

The heart lay completely horizontal, the right ventricle of course quite empty, and the left nearly so. This condition of the heart was in all probability purely mechanical, produced by an emphysematous condition of the lung above, and the over distended state of the abdomen below; the symptoms which belonged to it were, the intermitting pulse, the imperceptible action of the heart, and its feeble sounds; and the gangrenous condition of the walls of the abdomen, the part in which, in the present instance, the capillary circulation was carried on at the most disadvantage.—*February* 2, 1867.

*Cancer of the Liver.*—Dr. Stokes said the specimens which he had to submit afforded an example of a form of cancerous disease of the liver, which was comparatively rare. A very large number indeed of the specimens of hepatic cancer which had come before the Pathological Society were examples of the encephaloid or brain-like deposit in the structure of the organ; and it was a disease which in many cases was singularly latent, until such time as the tumour attained a certain degree of development. It was also remarkable with regard to encephaloid cancer that it was often a painless disease. In this case the principal symptoms were jaundice and intolerable and persistent pain. He did not think, except perhaps when under the influence of anodynes, this poor creature was free from hepatic pain from the beginning of her illness, seven years ago, up to the period of her death. The severe lancinating pains, which are characteristic of scirrhus, may be said to have been hardly ever absent. The jaundice was at first of the ordinary yellow colour, but for some months previous to her death it was what was vulgarly called "black jaundice." Looking at the persistency of the jaundice, and the intolerable pain to which the patient was subjected, he came early to the diagnosis that it was a case of scirrhous cancer. At that time no physical sign existed, but two months before her death all doubt was removed, for the liver could be felt protruding from under the ribs and with an irregular surface. This irregularity of surface increased with such extraordinary rapidity as to make him doubtful as to the nature of the disease, for they all knew that encephaloid cancer ran the latter part of its course wlth extraordinary rapidity. The patient died with symptoms of gangrene of the feet. She had coldness of the extremities, and blackness of the feet and nails; the jaundice continuing.

The liver which he now exhibited afforded a remarkable specimen of exceedingly hard cancerous degeneration of the lower part of the organ. At the lower margin of the right lobe there was a mass, of cartilaginous hardness, imbedded in the structure of the liver. It was quite different from the ordinary encephaloid, which was of a white colour, and brain-like consistency. Similar masses, though not to the same extent, were found in the substance of the left lobe. The disease had engaged first the margin of the liver, adjacent to the gall-bladder, which it had completely obliterated. With respect to the connexion of jaundice with cancer of the liver, it seemed probable there was nothing in cancer of itself to give rise to jaundice. Numbers of cases of this disease had been detailed before the Society in which there was no jaundice; and in those in which it occurred, it seemed to be more or less accidental, and to be due to a cancerous invasion of the gall-bladder or of the hepatic duct. A small hardened tubercle existed at the top of one of the lungs. There was but little ascites. There was an enlargement of the epigastric and mammary veins, but not at all to the extent seen in other cases of hepatic disease.—*February* 16, 1867.

*Ligatured Femoral Artery.*—Dr. BEATTY exhibited a portion of a femoral artery which had been tied for popliteal aneurism, by Mr. Young, of Monaghan.

The patient was a man, fifty-three years of age, who, on the 27th of October last, was admitted into the Monaghan Infirmary, labouring under popliteal aneurism of a considerable size. Mr. Young adopted the plan of treatment by pressure, and persevered in it with great assiduity for the space of fifty days, from the 28th of October to the 16th of December, varying the place to which the pressure was applied, as well as the instruments by means of which it was effected. This was rendered necessary in consequence of the untoward circumstance of every spot compressed by the pad becoming inflamed and ulcerated.

On the 16th of December the tumour had increased so much, and all attempts at cure by pressure having signally failed, Mr. Young determined to cut down upon and tie the femoral artery in the usual place.

On the 22nd three drachms of thick purulent matter came from the wound.

On the 13th of January, twenty-eight days after the tying of the ligature, Mr. Young says:—"During the last eight days I have daily rolled the ligature over a pad transverse to the wound. On drawing it this day, the ligature came away suddenly, by a strong snap, as if it had been detained by granulations; its separation was not followed by a drop of blood."

On February 2nd, twenty days after the ligature came away, the man was discharged, convalescent: the tumour had nearly gone.

The specimen now exhibited by Dr. Beatty consisted of the portion of artery which had been tied, which, instead of being cut through by the ligature, as usually happens, had come away with it, about an eighth of an inch of the artery being attached to the ligature which surrounds it. This portion of the artery had separated above and below the ligature. The coats of the artery can be well traced on the ends of the detached portion. The lining membrane of the portion nearest the heart was pink in colour; that lining the distal end was of a dull yellow. Mr. Young observes that this giving way of the tied portion of the artery might be due to the evident tendency to ulceration in this man's constitution, which made it impossible to apply pressure to the integuments without causing ulceration.—*February* 16, 1867.

*Malignant Disease of the Stomach.*

Dr. LITTLE said the parts which he now exhibited were taken from the body of a woman who died in the Adelaide Hospital, into which she had been admitted about the end of last month. She said her age was thirty, but she looked very much older. She was emaciated to the last degree, and in such a lethargic condition that it was difficult to get from her any account of her illness. She complained of pain, which she invariably

referred to a point between the umbilicus and the pubes. Taking food caused pain in the abdomen, followed by vomiting of black matter. The bowels were confined, in fact they were never moved naturally. She stated that she had been in good health till nine months before, when she commenced to feel a lethargy creeping over her, with nausea and sickness of the stomach. At the same time she felt pain, not at this period confined to any particular part, and not increased on taking food. After six months the symptoms became suddenly aggravated. She then, for the first time, noticed that the pain was aggravated by taking food, and for the first time it began to strike her in the back. She noticed also that the vomited matter became black, and after that she rapidly got into the condition in which she was when admitted to hospital. She lived longer than he expected.

On opening the abdomen the stomach was found to be somewhat distended, and its coats thickened, the thickening increasing as it approached the pylorus, and extending into the duodenum; at the pylorus there existed a hard mass of malignant disease, the interior of which was softened and ulcerated. In the liver was found a single nodule, and also one in the folds of the peritoneum. Some of the lumbar glands were enlarged and hardened. The rest of the body was not abnormal, except that throughout it presented in an exquisite degree that blanched appearance which is seen in those who die after a protracted illness, in which the introduction of food into the system has been impossible.

The appearance of the section, the peculiar ragged character of the ulcer, the existence of a nodule in the peritoneum, the enlargement and hardening of the lumbar glands, proved that it was not a case of primary ulcer going on to induration, but one of malignant disease leading to ulceration. It was worthy of remark that the early symptom was not pain but nausea and sickness, and that the symptoms did not gradually grow worse, but became suddenly aggravated six months after the commencement of the illness. It was remarkable, also, that the point to which she referred the pain was between the umbilicus and the pubes. He lately had an opportunity of examining a man, in whose case also there could be no reasonable doubt scirrhus of the pylorus existed, yet the pain was not referred to the pylorus but to another part of the abdomen.—*February* 23, 1867.

*Ulceration of the Intestines.*—Dr. H. Kennedy exhibited a specimen of ulceration of the ileum. The patient was a man, aged twenty-one, and was reported to be eight days ill. When first visited the nurse stated that he had been raving all night, and attempting to get out of bed. It was with difficulty he could be got to put out his tongue, which was red and furred in the centre. He lay on his side with his legs drawn up; his pulse was quick, and his skin hot. The eyes were slightly injected.

No spots were visible. At the second visit, the ninth day of his illness, the nurse reported that he had a similarly disturbed night, and in addition that he had passed under him, and that his bowels seemed to be too free. There were still no spots of any kind. He lay heavy and stupid, and no answer could be obtained from him. In this state he continued two days longer, when he died. The patient had been, in all, twelve days ill, of which four had been spent in the hospital. Though means were taken to check it, the diarrhea continued to the last.

On examination after death a very marked specimen of typhoid ulceration of the intestines was found. The glands also were enlarged.

Dr. Kennedy thought the case particularly worthy of notice; for during the life of the patient he was not able to arrive at any accurate diagnosis. The symptoms referable to the brain were so predominant, and the whole state of the patient such that no information could be obtained from him. The absence of eruption added to the obscurity of the case, which was also remarkable for running its course in the short period of twelve days.—*February* 23, 1867.

*Cerebro-spinal Meningitis.*—Dr. BARTON exhibited recent specimens illustrative of this disease, taken from the body of a man aged fifty, who was admitted into the Adelaide Hospital, February 22nd. He was totally insensible to anything said to him or going on around him; but it was not the insensibility of coma or apoplexy, inasmuch as he was not lying heavily, but was sitting up with his head erect, and rather bent back, at the same time moving his limbs in different directions; his eyes were open, but he apparently saw nothing. On being spoken to he could not make any reply, and was unable to put out his tongue. The breathing was extremely loud and stertorous; the arms were somewhat rigid, and both thumbs were bent into the palms. His hands and feet were of a dark livid colour, and very cold; there was an eruption all over his body, and the lower limbs were covered thickly with red, and slightly elevated, spots. Another remarkable appearance presented by the skin was, that all round both sides of the chest it was torn with his nails from violently scratching himself, which was afterwards explained by his wife, who stated that his illness was accompanied at first by intense itching. His pulse was rapid, and hardly to be felt. He was given some drink, but could not swallow.

The following was ascertained to be the history of the case. He was admitted on a Monday; on the Saturday morning previous, he was going to his work when he was seized with a severe rigor. He was unable to take any breakfast; he struggled to do his work, but was sent home in a cab by his fellow workmen, being unable to stand. On arriving at home he was hardly able to speak. He addressed a few words to his wife, and when his daughter came in he said a word or two, but never spoke after-

wards. His breathing was stertorous after he went into bed, and remained so. On the following morning all the symptoms increased in intensity, when Dr. Ashford, of Donnybrook, was sent for to see him. He found him in a complete state of collapse, cold, and livid, and in very much the same state which he was when admitted to the hospital. He had been a delicate man, for a considerable time suffering from chronic bronchitis. He had also some obscure cerebral symptoms, which, as far as could be ascertained, never passed beyond a tendency to sleep, and a slight loss of memory.

On the following day he was completely paralysed on the right side; the left arm and leg being in a state of rigidity. He continually kept moving the left arm about; yet kept it for a considerable time in any position it was placed in. The urine was retained, rendering necessary the introduction of the catheter. It was of a dark colour, contained albumen, but was of normal specific gravity. The breathing became more and more stertorous until he died upon Tuesday evening, being the fourth day of his illness. There was, on his admission, strabismus of both eyes to the left; there was no convulsion at any time. On raising the calvarium no fluid escaped from the cavity of the cranium, but the longitudinal sinuses were filled with dark and very thick blood. The surface of the left hemisphere was thickly covered with a quantity of greenish lymph, which was deposited *beneath* the arachnoid, the surface of which was dry and dull looking; the lymph was also deposited to some extent over the upper surface of the right hemisphere—in the fissure of Sylvius—and over the pores; there was no fluid whatever in the ventricles, or effusion of blood in any part of the brain. The cord was congested and presented a dry appearance.—*March* 2, 1867.

*Foreign Body in the Pericardium; Petechia Maligna.*—Patrick Cunningham, a policeman, aged twenty-two, was admitted into the Hardwicke Hospital, January 31st, under the care of Professor M'Dowel. It was stated that he had always been a healthy man; that his habits were temperate, but his disposition sluggish. On the night of the 29th he went on duty in perfect health, and came off duty at two o'clock a.m., on Wednesday morning. An hour afterwards he complained of getting chilled, and feeling a great pain in his head and chest; he vomited a few mouthfuls of fluid, was very cold and weak, and had pains in all his limbs. He was visited by the medical officer of the police at one o'clock p.m., who prescribed for him. At about three o'clock his face began to change colour, some dark spots appearing on it, and gradually growing larger; next his legs became discoloured, and then his arms and trunk; at eleven p.m. he became much worse, and was removed to the hospital at two a.m. on Thursday, the 31st.

On admission he was cold, and complained of coldness, and great pain

in his head, chest, and extremities, and said he felt "perished." His intellect was perfectly clear, but he seemed frightened and restless, moving from side to side in his bed; the entire surface of his body was covered with dark purple blotches of various sizes; his nose and lips were perfectly black; a large purple patch occupied each cheek and forehead; the outlines of these blotches were distinct and well-defined, and exceedingly irregular, looking like so many small maps sketched out on the surface of his body with some dark purple stain. The pulse was not perceptible at the wrist; the action of the heart was so irregular and rapid that its contractions could not be counted; his tongue was dark blue; the vomiting had ceased.

He had no pain or retraction at the back of his neck; all the spinal muscles felt soft and natural. The blotches increased in size, and became confluent on the face and extremities. He died at six o'clock a.m., or twenty-seven hours after the commencement of the attack.

*Autopsy.*—The veins of the scalp and the sinuses of the dura mater were distended with dark blood. There was no morbid appearance in the brain or spinal cord. The lungs were in a state of intense hypostatic congestion, but crepitant throughout. The pericardium contained about an ounce of fluid, and also a small white body of cartilaginous consistence, free and loose in the cavity. On the front of the heart there were some white spots, but no sign of any adhesion of the body in any one place; the heart was large, and nearly empty; the ventricles contained a small amount of fluid blood. The liver and kidneys were congested, and the supra-renal capsules perfectly black in colour. The remaining viscera were healthy.

In twenty-eight hours after death the body had completely lost the dark, congested appearance which it had presented, and became of a vivid red colour, the eruption remaining distinct.

Professor M'Dowel observed that some regarded this disease, of which several instances had already occurred, as an example of malignant fever, and others as a modification of measles. He saw no reason, however, for adopting either view, and was disposed to regard the disease as a modification of the cholera poison. Cholera, he observed, was essentially a hemorrhea, the serum of the blood being poured out into the gastro-intestinal cavity, but in this case there was a true hemorrhea, the blood (not its serum only) being poured out into the substance of the skin, and, just as in cholera, death was due merely to the amount of serum lost, so here the cutaneous hemorrhage was not the direct cause of death, but, like the serous hemorrhage of the cholera, was but the evidence of a morbid condition of the blood.

In this disease, which he said might be termed "petechia maligna," there was, as in cholera, profound depression of the vital power, and rapid nervous exhaustion. In both diseases the mind remaining unaffected,

and in both the principal morbid changes consisted in more or less intense congestion of internal organs, especially the lungs.

Examples of this "petechia maligna" had occurred before the outbreak of cholera last year, and the disease had reappeared on the disappearance of cholera; and hence it was possible that some modification of the poison, whether telluric or atmospheric, which developed cholera, might have produced this equally fatal disease. A dark purple eruption had been observed in some cases of cerebro-spinal arachnitis, but it differed from that in the case above detailed. In the former dark serum, effused beneath the cuticle, caused raised vesicles, as occurs in gangrene; in the latter, the blood was found effused into the cutis vera, and caused no elevation of the surface.—*March* 2, 1867.

*Aneurism of the Aorta.*—Dr. Banks exhibited an example of aortic aneurism, for which he was indebted to Dr. Macnamara, Assistant-Surgeon of the 4th Dragoon Guards. The subject of it was a soldier, aged twenty-eight, a strong man, and a man of good character. From the time he entered the service, ten years ago, a clean bill of health stood against his name. On subsequent inquiry, however, it was found that for a few days before his death he complained of a tickling cough, but so slight, that he did not apply to either of the medical officers of the regiment. He was walking across the barrack yard when he fell down, and died instantaneously.

On making a *post-mortem* examination, Dr. Macnamara found the left pleural sack full of coagulated blood, nearly as much as filled a wash-hand basin; he found a large ragged rent in the pleura at its upper and inner part, caused by the bursting of an aneurism of the aorta. The tumour was directly on the front of the arch of the aorta, and projected downwards in front of the apex of the pericardium. On opening the tumour, it was seen that it communicated with the aorta by an oval aperture in the anterior wall of the vessel, close to, but not involving the origin of the innominate artery; there were a few shreds of laminated fibrin adherent to the walls of the sac; the areolar tissue of the mediastinum contained a small quantity of blood; the aorta, above and below the opening of the sac, was studded with atheroma, and showed evident traces of a former attack of inflammation; the portion of the vessel which lay at the apex of the pericardium was connected by bands of organized lymph to the walls of the cavity; there was no appearance of pericardial inflammation having extended to the remainder of the cavity. This evidence of past pericarditis, limited to a small portion of the membrane was of interest: it seemed to have been entirely due to aortic inflammation. The aortic and mitral valves were healthy, and the heart seemed free from disease. The aneurism had not engaged either the pneumogastric or laryngeal nerves on either side, nor had it compressed

either the great veins or the trachea. These points are of interest with reference to the absence of symptoms during life.

Dr. Banks stated that it was worthy of notice that in this case there was complete absence of all pain or suffering. The only deviation from the man's ordinary health was the presence of a tickling cough, but of so trivial a nature, that he never applied to the medical officers of the regiment; he merely asked the hospital sergeant to give him a cough mixture.

It is well known to all who have had much experience that thoracic aneurism is sometimes latent up to the moment when it destroys life, and the case under consideration is a remarkable illustration of this important fact.—*March* 2, 1867.

*Disease of the Mitral Valves.*—Dr. M'Swiney said that a woman, fifty years of age, entered Jervis-street Hospital, stating that she had been in excellent health up to a few months previously. She complained of cough, recent cold, and weakness, and she expectorated a very considerable quantity of frothy and glairy mucus. She was found, on examination, to present merely the symptoms of capillary bronchitis. There was a mucous râle, and considerable expectoration of a fine mucous character; her pulse, however, was scarcely perceptible; and, upon examining the region of the heart, there was found an occasional interruption of its action. Her debility increased, and the stomach rejected medicine of any kind. The right chest posteriorly became slightly and comparatively dull. Notwithstanding the absence of signs of anything except engagement of the finer bronchial tubes, he could not avoid the conclusion, from a review of her general state, that there was more serious mischief than would appear from merely regarding the physical signs, and that the case would end fatally.

He suspected that there was some disease of the heart, and he examined that organ frequently, and with the utmost care, but there was never present any abnormal sound whatsoever. The only thing observed connected with the heart was this—that, whilst its action, though irregular, was distinctly heard, and its impulse powerful in the precordial region, it had not power to propel the full stream of blood, so as to give a strong impulse at the wrist. On Wednesday there was superadded sudden and great orthopnea. She was unable to lie down, could not sleep at night; the expectoration became tinged with blood, and her weakness increased. On Thursday and Friday the quantity of blood in the expectoration increased considerably, and late last evening she died suddenly.

*Autopsy.*—The right lung was the seat of pulmonary apoplexy. It was adherent by dense and old pleuritic adhesions, and was loaded with extravasated blood throughout. The left lung did not present any

particular feature of interest, except that its dependent parts were congested—consolidated, in fact, but not so much as to sink in water.

The heart was very large and fatty; and there was a feeling of great induration conveyed to the finger on handling it at its base. On laying open its cavities, the left auriculo-ventricular opening was found to be surrounded by a circle of morbid deposit, partly cartilaginous, partly osseous.

The stomach presented an appearance which had more than once been mistaken for the effects of an irritant poison. She had had no idiopathic vomiting. She refused to take medicines, as she complained that they made her sick; but she had no nausea, and occasionally took drinks. There was, therefore, no symptom of gastritis; and yet not only was there universal and great vascularity of the mucous membrane, but an extensive patch of it was raised up in olive-coloured bullæ by air in the submucous tissue. It was, of course, very well known that this description of appearance in the stomach resulted in many forms of death (as described by Dr. Yellowly and others), without any previous gastric inflammation.

On examining the condition of the uterus, he found attached to it a fibrous tumour, which was larger than the body of the organ itself.

This case added one more to the numerous list of instances of valvular disease of the heart going on to the production of fatal engorgement of the lungs without the presence of *bruit* in the precordial area.—*March* 2, 1867.

*Disease of the Mitral Valves.*—Dr. M'Swiney said, a boy, aged eleven years, was admitted into Jervis-street Hospital, complaining of palpitation, cough, with bloody expectoration, wasting, and great weakness. His pulse was 125; his face was pale; there was an extensive crepitus or muco-crepitus audible over the front of both sides of the chest. Posteriorly there was slight dulness over the upper part of the right lung; the hand placed over the cardiac region experienced the sensation of extensive "fremissement cataire;" and the ear placed to the heart recognized a systolic bruit, most audible at the apex of the organ. The case was obviously one of disease of the left auriculo-ventricular opening, admitting of regurgitation, with pneumonia of the upper and posterior part of the right lung, and probably (judging from the boy's aspect, and the diffused fine crepitus) accompanied by scattered tubercle.

On February 24th a totally new sound suddenly became audible—viz., a loud cooing murmur. It was an interrupted, short, musical note, heard over different parts of the chest, but most distinctly over the right side. There was no other change in his symptoms, and he did not appear to be in imminent danger.

Towards the evening of that day he complained of increased distress in

breathing, but there was no marked dyspnea at the time; and the resident clinical clerk, who saw him, was not in the least apprehensive of danger. At half-past nine that night he complained of pain in the pericardial region, and desired to be placed sitting up in bed. The Sister in attendance applied a mustard blister, and left him to get some hot drink; when she returned, after a few minutes' absence, he was dead. He died quite suddenly, and without any convulsions, the only symptoms preceding death being uneasiness, and the painful sensation in the cardiac region.

*Autopsy.*—When the chest was opened, the serous surface of the lungs was found to be studded with miliary tubercles. The upper third of the right lung was solidified, and sank in water; the upper third of the left lung was dark-coloured and congested, but contained air, and did not sink in water. In each lung there were a few hard nodules, of the size of a hazel nut, and dark, almost black, in colour, and which sank in water. There was serum in the pericardium. Both sides of the heart were full of blood, which was partly coagulated in the ventricles, completely so in the auricles. Upon opening the left ventricle, the auriculo-ventricular aperture was found contracted, and covered with vegetations.

Fatal cases, Dr. M'Swiney said, of heart disease, had been so frequently submitted to that Society, that he should not have thought of bringing this example under their notice except for the fact that, in proceeding with the examination of the heart, the actual and immediate cause of the sudden death was ascertained to be an *ante-mortem* fibrinous clot, lodged in the left auriculo-ventricular opening, which it effectually plugged.

The formation of thrombi had been rendered familiar by cases brought forward by Dr. Hayden during last Session, as well as by others previously submitted. In this instance a thrombus had formed in the right as well as the left auricle. It was a thrombus which was distinctly of *ante-mortem* formation in both situations. It existed in the right auricle as a mass of decolourized blood, and was adherent to the interstices of the auricle. But in the left auricle there were found three fibrinous masses—one as large as a pistol bullet, yellowish-white in colour, hard and consistent, and looking almost organized. One of a globular form was imbedded in the auriculo-ventricular opening, and there were two or three others occupying the appendix of the auricle. Looking at Dr. Walsh's work on the subject, he found that he devoted a very elaborate chapter to the subject of coagulations of the blood, dividing them into three forms, according as they occurred, *ante*, *inter*, or *post-mortem*. He remarks that they usually occur in the left auricle, and says that he generally found them in the appendix. In this instance of Dr. M'Swiney's two of these decolourized fibrinous concretions were

found in the appendix of the left auricle, and the third plugged up the auriculo-ventricular opening. It was, no doubt, forming when the boy experienced increased distress; and when fully formed, death was the result.

He regretted that a more minute investigation of the state of the heart had not been made on the day of the boy's death, when the new and unusual murmur first presented itself; and he concluded that this sound was caused by the process of coagulation then going on in the heart.—*March* 9, 1867.

*Rupture of one of the Aortic Valves.*—Dr. Hayden exhibited an example of rupture of one of the segments of the aortic valve, as the consequence of shock upon the sternum. He might observe, *in limine*, that accidents of this kind, as the result of muscular effort or shock occurring in hearts not previously diseased, were exceedingly rare—so rare, that Dr. Peacock, who had searched extensively for the purpose of collecting such cases, had only been able to discover seventeen of them. The patient was a man, aged thirty, a painter's assistant. He was admitted into the Mater Misericordiæ Hospital on the 16th of last November. He had been some time in the army, and whilst engaged in the Cape of Good Hope, in defending a stronghold, probably against a raid of the natives, was thrown from a rampart, and sustained a shock in the chest; he felt stunned, but subsequently recovered perfectly. This occurred some years ago. He had been intemperate for the twelve months preceding his admission to the hospital, but never had a serious illness of any kind. Six months before admission he observed, for the first time, that he was growing thin; he likewise experienced a partial loss of appetite, and sickness of stomach. On the 12th of November, four days before his admission, he experienced what he described as a choking sensation in the neck, and some difficulty of swallowing, which continued for three days subsequently. Coincident with this, there was sickness of stomach. All these symptoms passed away, with the exception of the irritability of the stomach. The legs were slightly œdematous; the veins of the neck remarkably congested, especially on the left side; there was a loud hacking cough of a spasmodic character, without expectoration; the pulse was 108, weak, but perfectly regular, and equal on both sides.

On examination, percussion resonance, and respiratory sounds were found to be normal over the entire front of the chest; precordial dulness was likewise normal in extent and degree; posteriorly there was some slight dulness over the base of both lungs, but otherwise the condition of these organs was normal. On placing the stethoscope to the region of the heart, he discovered a double murmur over the base of the organ; of these murmurs, which were systolic and diastolic, the latter was much the louder: the diastolic murmur was not only louder relatively, but it

was a remarkable sound in itself; it was traced up the ascending portion of the arch of the aorta, but with diminished intensity; it was transmitted to the cervical vessels, and diffused over the front of the chest; a murmur was also heard over the left scapula, but was single; a double murmur was likewise heard over the apex, but less distinctly.

On the following day, the 17th of November, the man's pulse was 120; he was perspiring profusely; he complained of pain in the ankles and knees, which were swollen. On the 18th he spat a little blood. On examining the chest posteriorly on this day, an increase of dulness was noticed on the right side. On the evening of the 18th he vomited a quantity of bilious matter, stained with blood. On the 19th the pulse came down to 102; he was perspiring freely, and complained of pain in the ankles and calves of the legs. A single systolic murmur was audible over the apex of the heart; dulness was increased both in extent and degree on both sides of the chest posteriorly; and over the bases of both lungs a loud muco-crepitus was heard.

On this day a remarkable phenomenon was observed in the vessels of the lower extremities. There was visible pulsation or throbbing of the anterior tibial arteries, and all their branches, extending into the feet, accompanied with a vibratory thrill. The temporal veins and the veins of the neck were also enlarged.

From the 19th to the 23rd, when the man died, there was no general examination made of the chest, owing to his extreme restlessness. During that interval he complained of undefined pains in the ankles and knees; he was restless, slept little, had a loud spasmodic cough, with continual expectoration of blood. On the day before his death it was remarked that the temporal arteries pulsated strongly; this had been previously remarked in the carotids. On the night of the 23rd, a few minutes before 12 o'clock, he died somewhat suddenly.

On making a *post-mortem* examination, both pleural cavities were found filled with amber-coloured fluid; the pericardium likewise contained a pint of similar fluid. The lungs were engorged with blood, were resonant, and floated in water, with the exception of the lower lobe of the left. The heart was a little larger than in health, and somewhat globular in figure; the right cavities were distended by dark semi-coagulated blood extending from the right ventricle into the pulmonary artery; the right auriculo-ventricular opening had become so dilated, that the points of four fingers and the thumb could be passed with ease from one cavity to the other; the right ventricle was slightly dilated; the left cavities of the heart were distended by blood of the same kind, and the left ventricle was thickened, but dilated; the mitral orifice was normal. The aortic orifice was apparently sound until an examination was made from the arterial aspect, and here it was found that the anterior and right segment of the sigmoid valve was partially detached from the root of the aorta,

its left cornu being separated from the wall of the vessel to the extent of nearly half an inch, and hanging loosely into the ventricle, in the natural position of the heart. Water poured into the aorta at once flowed into the ventricle through the patulous orifice. The valves themselves were perfectly sound, as likewise was the aorta. On carefully examining the roots of the lungs, he found a mass of bronchial glands greatly enlarged, and pressing upon the bronchi; several large glands were likewise found in the posterior mediastinum, detruding the œsophagus to the left, and pressing upon the posterior (non-cartilaginous) wall of the trachea. They were solid, dark in colour, and mottled over the surface and in the interior with white spots; in the centre of one there was matter of a hard, cheese-like character, which on pressure yielded a quantlty of pus; on examination microscopically, the cheesy substance was found to be tubercular.

There could be no doubt, judging from the man's previous history, and the evidence afforded by the *post-mortem* examination, that the rupture of the aortic valve occurred at the time he was thrown from the rampart. It could be easily supposed that if, at such a moment, the chest was in the acme of expiration, the sternum being thereby brought into close contact with the pericardium, and through it with the root of the aorta, and if, during the diastole of the ventricle, and at the moment of reaction of the aorta upon its contents, the semilunar valves being closed, a severe shock were received upon the sternum, the valve segments might be thereby ruptured, or rent from their attachments.

This case was interesting in other particulars. It afforded an example of the physical signs of aortic valve disease, both obstructive and regurgitant, occurring in a case in which there was no disease of the heart or valves, the lesion being purely the result of accident. It was likewise interesting as showing that there might be a loud left scapular murmur in the absence of mitral and aortic valve disease. Much importance had been attached to this sign as diagnostic of mitral valve disease. The occurrence of difficulty of swallowing was likewise interesting. This continued for three days, and was accompanied by occasional spitting of blood and spasmodic cough. The suspicion of aneurism occurred to his mind, but he could find no positive evidence, with the above exception, to favour that suspicion. The enlarged and solidified glands that occupied the posterior mediastinum and roots of the lungs, and pressed upon the œsophagus, trachea, and bronchi, afforded a sufficient explanation of the dysphagia and spasmodic cough, which gave rise to the suspicion that aneurism existed.

With regard to the state of the lungs, Dr. Stokes, in his great work on Diseases of the Heart and Aorta, remarks that in aortic regurgitation pneumonia of a low kind was likely to occur, and be the immediate determining cause of the fatal issue. He had no doubt the sudden death

in this case was owing to the state of the lungs, hastened by the rapid effusion into the pericardium and the pleuræ.—*March* 9, 1867.

*Aneurism of the Aorta and of the Axillary and Popliteal Arteries.*—Mr. Porter presented to the Society the lungs, heart, aorta, right femoral, and left axillary arteries, taken from a patient, aged sixty-eight years, who died in the Meath Hospital on last Wednesday morning. He had originally admitted this man so far back as April, 1865. He was then labouring under popliteal aneurism at the right side, which was cured by digital pressure in twenty-six hours and three quarters. He was again admitted in last July, complaining of excruciating pain in his left arm; and, on examination, there was discovered an axillary aneurism, situated below the left clavicle; an attempt was made to cure this by digital pressure on the subclavian artery, but the pain could not be endured. Tying the subclavian artery was contemplated, but in consequence of his colleagues, Drs. Stokes and Hudson, being of opinion that the aorta was greatly diseased, the idea was abandoned. The immediate cause of death was pericarditis with pleuritis.

It was found, on making a *post-mortem* examination, that not only was there an immense dilatation of the arch of the aorta at its origin, but that it was otherwise diseased, there being atheromatous deposit to a great extent. Another aneurism was discovered in the descending portion of the aorta. On examining the axillary tumour, it was found filled with layers of fibrin, and intimately connected with the brachial plexus. The femoral artery was obliterated down to the remains of the popliteal tumour, which was about the size of a small nut, very hard, and filled with fibrin. Both layers of the pericardium were covered thickly with coagulated lymph.—*March* 16, 1867.

*Malignant Purpuric Exanthem.*

Dr. M'Swiney, communicated the following case:—On Wednesday (February 20) a woman presented herself at Jervis-street Hospital, seeking medical aid for her female child, aged six years, who she stated had been in perfect health the day before, had eaten heartily of a meat dinner, and gone to bed perfectly well, but became feverish towards morning. She was hot, restless, and sick. At eight o'clock she got a cup of tea, which was rejected, and during a period of two or three hours afterwards she got several drinks, all of which she vomited. At the same time she complained of being unusually chilly, but had no convulsion, pain in the head, or other alarming symptom. At eleven o'clock, the mother noticing that there was a rash appearing on the upper part of the body, brought her to the hospital. When he saw her, at one o'clock, she had the expression of one about to die very soon. She was collapsed, cold, pulseless at the wrist, with feeble pulsation of the heart. Her face was marked with a number of purplish spots, petechiæ in fact. The body was covered

extensively, as were also the extremities, with irregular patches of ecchymosis, some of them very large, and of a deep bluish, livid hue. Extending over a great portion of the gluteal regions were other small round petechiæ, all unattended by any elevation of the cuticle. At a quarter past three o'clock he visited the hospital again, in company with Dr. Lyons, to whom he was anxious to show the case, and on his arrival the child was dead—that is to say, four hours after the petechial eruption made its appearance, seven after the occurrence of vomiting, and at the outside ten or twelve hours from the time at which the child was first noticed to be unwell, if the statement of the mother on this point was to be believed. The order of symptoms was, vomiting, first; chill, second; rash, third. It was remarkable that there was no convulsion until a few moments before death, when the child had a rigor, followed by a convulsion. It was also worthy of remark that the animal heat returned before death. Reaction set in and heat returned before death, and continued very well marked for some considerable time after death, suggesting a resemblance to those cases recorded where there was a great exaltation of temperature after death, as in cholera and yellow fever. A *post-mortem* examination was made of the body, but the results were for the most part of a negative character. The organs of the thorax did not in the least degree differ from their normal state in health. The same might be said of the liver, stomach, and upper part of the intestinal tract. He had brought with him the cecum, with two or three inches of the ileum and colon, which showed numerous tranverse bands of livid and congested mucous membrane, the congestion and turgescence being most marked at the valve, which had the appearance of being about to salivate. There was a ring of pea green discolouration around the entire of the abdominal parietes, making the early commencement of putrefaction. There was no urine in the bladder. The heart was very large, and all the cavities were full of dark blood, in a semi-coagulated state. There was not the slightest appearance of any meningeal lesion either in the brain or spinal cord, with the exception of a few dark spots like sanguineous effusions under the arachnoid. There was nothing in the appearance of the spinal cord of any importance, except a slight degree of congestion. He had brought away with him a cluster of enlarged mesenteric glands, which contained a considerable amount of cheesy-looking matter, a condition of very frequent occurrence in the children of the poor, and which could hardly be supposed to have any connexion with the disease of which the patient died.

He thought that a disease which proved fatal with such fearful rapidity, and where so little abnormal could be found after a careful *post-mortem* examination, must, of necessity, be considered a blood disease; and he had deemed it well that some portion of the blood should be examined. He had not, however, found it possible to get a proper chemical

examination of it in the short time that had elapsed since the child's death; but a microscopic examination was made, the results of which he thought were important. Dr. Crynan wrote to him as follows:—"I have just made a most careful microscopic examination of the specimen of blood, and find that the *white* corpuscles are at least three times more numerous than in health. Free fatty molecules are present in considerable numbers. The red corpuscles present all their normal characters."

Dr. M'Swiney observed that when he saw the eruptions on the body of this child he was at once strongly reminded of *purpura*. Cholera occurred to the mind of one gentleman who saw the case from the deep discolouration of the skin, but there was no pinched and shrunken face—no choleraic vomiting or diarrhea—no painful muscular spasms—and the discolouration of the skin was totally different. From measles the distinction was easily made. There was no catarrh, which usually preceded measles, nor any elevation of the surface. The hand, passed carefully over the surface of the skin, failed to detect the smallest elevation, and it was totally different from what is called "black measles." The woman, however, declared that the child had had the measles, which set this question to rest. Finally, he would remark that this was the disease to which Dr. Lyons had called attention some months ago, and of which some twenty or thirty fatal cases had occurred, and which in the first hurry of the moment he designated the "black death." He thought this name was not appropriate. The black death of the middle ages was a different disease. It was the "plague," in fact. The body of the patient was covered with boils, imposthumes buboes; and there was hemorrhage and spitting of blood. He would venture to suggest that a designation, so non-descriptive, should be abandoned. It was more difficult to suggest what the disease should be called; but, considering that it was most like purpura, and extremely fatal, he would propose to call it *malignant purpura* or "Malignant Purpura Exanthem."—*March* 23, 1867.

*Pericarditis after Typhus.*—Dr. Lyons made the following communication to the Society:—Towards the close of the month of March, a case of interest terminated at the Hardwicke Hospital, under the care of Dr. Lyons. The patient was a lad aged seventeen years; and had been some weeks in hospital at the time of his death. He exhibited all the characteristic symptoms of typhus of a low type, with depressed circulation and enfeebled heart. Soon after his admission, Dr. Lyons observed the development of a very extensive diphtheritic exudation on the throat, which threatened at one time to be a fatal complication. It was not so, however; under watchful management this symptom was overcome, but only after much trouble. For seven days or more the exudation was appearing and disappearing on the throat, nowithstanding the various local and general modes of treatment used for it. Near the end of the fourth week

the patient was making a fair recovery, and most of the serious symptoms had disappeared, when there was observed a peculiar irritability of the pulse, which rose to 120, and also a distinct increase of the cardiac action. Dr. Lyons did not readily incline to the opinion that anything of an inflammatory nature was likely to attack the heart at this advanced stage of typhus; but a few leeches were applied over the region of the heart, with the result of giving some relief to the patient. In a few days the symptoms became gradually more aggravated, and the lad died on the twenty-seventh day of his illness.

*Autopsy.*—The entire of the pericardium and the surface of the heart were covered with lymph. There was effusion of fluid to the amount of eight or nine ounces into the pericardium; and it was concluded that the sudden occurrence of this effusion was the cause of, and sufficiently accounted for the rapidly fatal issue of the case.

Dr. Lyons remarked that, in his experience, this was the second case of pericarditis proving the immediate cause of a fatal termination in typhus; and, on looking over the standard works on the subject, he found that it was a very unusual complication. In the first case which he saw, the patient died on the twenty-fifth day of his illness, with characteristic symptoms; and, although he could not give proof similar to that in the present case, viz., by the result of a *post-mortem* examination, that the proximate cause of death was pericarditis, yet no doubt existed in his mind that such was the case. The friction sound was exceedingly well marked, and it was noticed that this person had shown extreme debility in the circulation, extremely feeble impulse, and debility of the cardiac sounds during the second week of his illness. The same symptoms existed in the case above noted; and it must be considered remarkable, where the heart was so debilitated in a disease like typhus, which, as the researches of numerous and well-qualified observers showed, produced so remarkable an effect in weakening the cardiac muscles—that at the termination of such a case the heart and its investing membrane should be enabled to "take on" inflammatory action of so high a degree as this. Dr. Lyons was also of opinion that, looked at from another point of view, this case was interesting; the exudation of lymph on the pericardium might be connected with the exudation of lymph in the throat, as a characteristic feature in this particular case.—*March* 30, 1867.

*Aneurism of the Aorta.*—Dr. Bennett exhibited a specimen of thoracic aneurism springing from the aorta, at its origin from the heart.

He said the case was one of much interest on account of the remarkable character and position of the tumour, and also on account of the fact that the nature of the disease had not been recognized during the life of the patient, although it had been the subject of the most careful and repeated examinations.

The man from whom the specimen was taken was a coal-porter, aged about forty years; he had lived and worked hard. On February 23rd, during the severe weather, he applied for relief at Sir Patrick Dun's Hospital. He was then suffering from violent cough and palpitation of the heart; his legs were œdematous, and there was a good deal of fluid in the abdomen. There were bronchial râles all over the chest; the area of pericardial dulness was much increased, and the heart's action was very violent and irregular. A loud murmur could be heard all over the cardiac region, of maximum intensity at the centre of the sternum; this murmur accompanied the first sound, and was prolonged along the aorta and great vessels; it could be traced as far as the pelvis. There was great difficulty in deciding whether the second sound was normal, and whether there existed any mitral murmur or not, in consequence of the great loudness of the first murmur, and the irregularity of the heart's action.

The case was admitted into hospital under the care of Dr. A. Smith. On admission the urine was examined, and found to contain a large quantity of albumen. It was noticed on the day following his admission that he complained of tenderness over the centre of the sternum, and that the impulse of the heart was of maximum intensity at this point—facts that, had they been attended to sufficiently, might have suggested the idea of the presence of an aneurism—the tenderness, however, ceased to exist after the first day. The man rapidly improved in health under the treatment adopted, and the heart's action became much quieter, and ceased to be irregular.

This improvement continued up to the end of the second week in March, the œdema of the limbs, &c., almost disappearing; about this time the man got up, and sat before the fire in the ward with only a blanket thrown over him; he got a fresh attack of bronchitis, and all his former troubles returned: he became unable to rest in any position but sitting up; the limbs became greatly distended, and were punctured to relieve the tension; a great quantity of serum escaped, with some relief to the patient, but he finally sank on April 2nd.

The *post-mortem* examination was made the following day: on raising the sternum from below upwards, the aneurism was opened into. The tumour was adherent to and had eroded the sternum, so that the bone could not be raised without opening into it; it lay directly over the base of the heart, and had pushed it backwards in the chest; the pericardium was found to be firmly adherent to the heart, the adhesions being of old standing; the membrane could be traced on the sides of the aneurism, and was adherent to the sternum where the tumour pressed against it. The sac of the aneurism seemed to be formed almost entirely by the adherent pericardium. In the cavity of the aneurism was seen a mass of laminated fibrin, which

occupied the portion of the tumour which lay below the aortic orifice. The orifice of the aorta opened directly into the sac; but the aortic valves were perfectly healthy, and were competent to close the orifice completely. Removing the coagulum from the sac, its posterior wall was found to be formed by the walls of the right auricle and ventricle; and the tumour projected into both of these cavities, compressing the tricuspid opening. The tumour descended downwards in front of the right ventricle to within two fingers' breadth of the diaphragm; the fibrous tissue of the aorta could be traced from the vessel above the tumour some way on its wall, but not over the entire tumour; the examination of the walls of the tumour suggested that it had obtained its great size, not by dilatation of the sinus of Valsalva, but by rupture of the sinus into an adherent pericardium. The coronary artery of the right side was occluded at its origin, and the heart was supplied with blood only by the left vessel. The position of this tumour was in accordance with the rule laid down by Professor R. W. Smith,[a] that, where an aneurismal tumour springs from the commencement of the ascending portion of the arch of the aorta, its tendency is to project downwards, in consequence of the pressure of the regurgitant stream of blood in the aorta. The unusual position of the tumour, and the peculiarity of the murmur (always an exceptional occurrence in thoracic aneurisms), explain in some degree the fact of its having escaped detection. The left ventricle was hypertrophied, but both its orifices were normal; the kidneys were large and granular; the back of the sternum presented a partly eroded surface; and the cartilages of the ribs were seen standing out, resisting absorption in the same way as the intervertebral discs do when involved in an aneurism.—*April* 6, 1867.

*Tubercular Deposit in the Lungs, &c.*—Dr. Lyons said, the morbid specimens which he now exhibited were taken from the body of a female, fifty-three years of age, admitted to the Whitworth Hospital some two months since. Her history was shortly this:—She was unmarried; her occupation was that of a hawker of fowl. She was very much addicted to intemperate habits; she was in the habit of hawking fowl from Dublin to Kingstown; and, when she sold a pair of fowl, she stopped at the first public house she met to take a drink; and, on an average—to give her own summary of her drinking habits—she drank two shillings' worth of spirits in the day. She described herself as being fat, stout, and strong, until two or three weeks before admission into hospital. She then began to suffer from severe vomiting, which continued for a fortnight or three weeks, with little or no intermission, and she then suddenly became

[a] "Contributions to the Pathological Anatomy of the Heart and Great Vessels," "Dublin Medical Journal," vol. ix.

jaundiced. When the jaundice was fully developed, all gastric irritation seemed to have ceased, and at no subsequent period was there any evidence of its return during her stay in the hospital. She made little or no complaint of local uneasiness. The evacuations *per anum* were solid, and showed no evidence of the presence of bile. There was bile in the urine, in the serum which came from some blisters which were produced, in the sputa, and, in fact, in every secretion, save those from the alimentary canal, bile was found in abundance.

He was disposed at first, looking at the history of the case, to regard it as one of those instances of disease brought on by excessive drinking—that a gastric irritation was set up, followed by subacute inflammation of the liver, and jaundice. He did not think it was an incurable case; gastroduodenitis, the result of excessive drinking, being often amenable to treatment, and resulting in a complete cure.

As the case progressed, however, it became clear that some further biliary obstruction existed. Every effort to procure a proper secretion of the bile was made without any effect. There was no tenderness at any time in the hepatic region; neither was there any tendency to gastric irritation, or any indication of a tumour causing obstruction. She lingered for some time with little change in the general features of the case, except that she became emaciated a good deal. She also became liable to a troublesome cough, with a certain amount of bronchial secretion tinged with bile. She slowly lost strength, and, without any new symptom, without any indication of biliary reaction on the cerebral system, or any appearance of a comatose condition, or of the bile acting as a poison in the blood, she died three days ago.

He made a very careful *post-mortem* examination, and found that the lungs presented a large amount of deposit, as to the exact nature of which he was at first a little doubtful. The liver was of a deep dark green hue; the gall bladder was enormously distended with bile. He then proceeded to examine the duodenum, to see where the obstruction was. It was found to be a mechanical one, and consisted of a mass of deposit, which he believed to be in the mesenteric glands, lying across the duodenum. The matter was excessively hard, firm, and resistant; it had plugged up completely the ductus communis choledocus, and prevented the flow of bile into the duodenum. The left kidney was not sensibly altered beyond being deeply coloured with bile. The right presented a remarkable change, being greatly diminished in size. At its superior extremity he found a mass of matter embedded in it, and several cysts full of soft, pulpy matter of a kind he was not very familiar with. It presented most of the elements of tubercular matter; but there was a great amount of fibroid structure through it, giving the mass the appearance of a fibroid tumour with tubercular matter deposited in it. Most probably, however, the tubercular matter was deposited in the glands, which became matted

together so as to form a tumour. He was now disposed to regard the whole of the deposit in the lungs as also of a tubercular character.—*April* 6, 1867.

*Contraction of the Right and Left Openings of the Heart.*—Dr. Little exhibited a heart, taken from the body of a woman, aged 23, who was admitted into the Adelaide Hospital ten days before her death, suffering from an affection of the chest, under which, he was told, she had laboured during the entire winter; she had, however, been able to attend in a millinery establishment until two or three days before her admission. When she came into hospital, she was breathless to the degree of orthopnea; her face was rather livid; she had a frequent cough; and expectorated small pellets of sputum, such as are seen in some forms of phthisis; her feet and legs were somewhat œdematous; she had a teasing diarrhea, and the urine was scanty and albuminous; all over the chest there was rather undue resonance on percussion, and a very fine bubbling râle was to be heard; the difficulty of breathing made a satisfactory examination of the heart difficult, but no murmur was noticed. She very soon became drowsy and confused, and died on the tenth day after admission.

On opening the thorax they found the lungs universally emphysematous; they were very much engorged with blood, and in one part there was a nodule of pulmonary apoplexy. On opening the heart, some curious features presented themselves. The right auricle was seen to be considerably dilated, and very much hypertrophied; the right auriculo-ventricular opening was so small, that it would barely admit the tip of the index finger; in the right ventricle there was no appearance worthy of notice. When the left side of the heart was examined, the mitral orifice was also found to be very much contracted, hardly so much as the right auriculo-ventricular opening, but still very considerably; the aortic valves were found to be slightly incompetent, and were studded with a few vegetations; on the surface of the right auricle there was a slight roughness, the only indication of there ever having been any inflammatory action, unless the slight warty appearance on the valves of the aorta might be attributed to that cause. The occurrence of very great narrowing of both the tricuspid and mitral openings was a rare condition; and he was anxious, therefore, to learn the history of the young woman, especially as he believed the change must have taken place at a long distant period, from the intimate fusion of the segments of the valves, and the absence of evidence of inflammatory action.

It appeared that the young woman had enjoyed good health till thirteen years old, when she had a catamenial discharge, and soon afterwards her breathing was noticed to be short; she suffered from palpitation on the least exertion, and began to have cough. From that time to the date

of her death she was always breathless, suffering from palpitation on making any exertion; had a good deal of cough in winter, and a slight cough in summer. Within the last five years, having been previously rather thin, she had fallen greatly into flesh, and for the last year especially so. Her sister stated that her feeling of depression and languor became so great latterly, that she was obliged to take wine. There was one appearance which his friend Dr. Head noticed the moment he saw her: viz., a peculiar clubbed appearance of the fingers, a condition often noticed in connexion with an imperfect circulation.—*April* 13, 1867.

*Pleuritis.*—Dr. HAYDEN said, the specimens he now exhibited were of an ordinary kind, but suggestive of very useful reflections. The viscera upon the table were taken from the body of a woman, 28 years of age, who was admitted into the Mater Misericordiæ Hospital on the evening of the 23rd of April. A cursory examination satisfied him that she was suffering from effusion into the left pleural cavity. About a fortnight ago, during one of the stormy evenings recently experienced, when going home from her place of business, she suffered a chill. The next morning she complained of acute pain in the left side. She neglected it—nothing being done beyond the application of a sinapism, which was so far misdirected that it was applied to the wrong side of the chest. When we saw her, on the evening of the 23rd, the left side of the thorax was dull; the heart pulsated beneath the right nipple; the dyspnœa was extreme; the patient suffered from repeated attacks of partial syncope; the pulse was exceedingly quick, and the respiration laboured. She seemed, under treatment, to improve somewhat. Yesterday morning, when he saw her for the last time alive, her tongue was brown; she was suffering from febrile symptoms; the embarrassment of respiration was relieved, the pulse of better volume, and she was generally improved. She had an attack of diarrhea in the course of the day. At six o'clock last evening she insisted on getting out of bed, contrary to the remonstrance of the nurse and Sister in attendance—she would not use the bedpan; and, when in the act of getting up, she fell back, and died instantly.

On examining the chest, he found the pleural cavity distended by amber-coloured serum, in quantity amounting to several quarts; the heart was displaced to the right side; the left lung was reduced to small dimensions, compressed, dull, and encased in an envelope of false membrane, of enormous thickness. The costal pleura, coated with a layer of false membrane of the thickness of sole leather, was exhibited, detached from the chest wall.

The right lung had acquired in some measure a compensatory volume; it was considerably enlarged, and in some places emphysematous. The pericardium and the heart were normal, with the single exception that the latter presented more than the usual amount of superficial fat. In

the apex of the right lung was an old cicatrix, manifestly a healed tubercular cavity. He had been informed by her friends that when a child she manifested symptoms of pulmonary phthisis.

The case was interesting mainly in this, that it should suggest the extreme caution to be exercised in movements of the body in cases of copious effusion into the chest. Paracentesis had been contemplated, but, owing to the improvement in the state of the patient, was postponed. —*April* 27, 1867.

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## PROCEEDINGS OF THE DUBLIN OBSTETRICAL SOCIETY.[a]

### TWENTY-NINTH ANNUAL SESSION.

Dr. Sawyer, President.

*Case of Early Abortion—Hemorrhage—Retention of the Placenta, and Removal.*

Dr. John A. Byrne said:—On the morning of the 29th November last I was sent for to see Mrs. F. She had been attacked with hemorrhage whilst in bed, and without any precursory symptom. It had been tolerably smart before my arrival, but had ceased on the application of cold to the vulva. She informed me that she was pregnant, in her own opinion, from the 14th July preceding, and that she had enjoyed excellent health from the commencement until about a fortnight previously, when she suffered a good deal from diarrhea, then prevalent, which left her in rather a weak condition; she had not suffered from morning sickness.

On examination, I found that there was not much hemorrhage going on; the vagina was dilated, the uterus enlarged, and pressing down into the vagina; but the os uteri was not dilated, nor was the ovum to be felt.

Her previous history was this:—She was the mother of two children, and had aborted twice before at three months of gestation. Her first miscarriage took place eighteen months before this, and she attributed it to a mild attack of fever; it was a twin abortion; the hemorrhage accompanying it was very severe, and she was almost moribund before I arrived at her house. She recovered quickly, again became pregnant, aborted a second time, again became pregnant in July, and was attacked by those symptoms, menacing a third miscarriage.

I enjoined absolute rest, ordered moderate cold to be locally applied, and gave her the gallic acid in mixture, with a small quantity of opium.

The hemorrhage ceased, and she went on very well for seventy-two hours, when she was again attacked by pains and hemorrhage, and on my arrival in a very short time after, I found that a pouch of membranes was protruding through the os uteri, they contained no ovum, but a

[a] These Reports are supplied by Dr. Geo. H. Kidd, Secretary to the Society.

quantity of dark-coloured amniotic fluid; this very soon came away, and was followed by the expulsion of a fetus, which appeared to be of about three months. It was flattened, shrivelled, and dark, and had evidently been some time dead in utero.

I waited some time, expecting the placenta to follow, but it did not, but in its stead a very smart hemorrhage came on. I passed my finger along the small funis to remove the placenta, but the os uteri was firmly closed. I then used some pressure over the uterus, administered ergot, and applied cold to the vulva; then made a very gentle traction on the funis, but all was without effect; the hemorrhage still continued, and in large quantity. I then endeavoured to dilate the os uteri with one finger, and made more traction, but without success; the bleeding continued, and to such an extent as to produce an effect upon the pulse, and symptoms of syncope were setting in. I determined now to remove the placenta, and passed the fore finger of the right hand through the os uteri, which gave some resistance, and supposing that I had nought to do but hook away a detached placenta lying loose in the uterine cavity, I was somewhat surprised to find that the placenta was so intimately attached to the fundus of the uterus that I had some difficulty in detaching it, being obliged to introduce two fingers, and remove it piecemeal. The placental mass appeared to be intimately soldered to the uterus by its entire surface, and although I drew down the uterus low in the vagina, by pressing with my left hand, and freely used the two fingers of my right, I yet found the greatest difficulty in detaching it. During the time of its removal, which occupied about five minutes, there was a good deal of hemorrhage, which ceased immediately afterwards, and there was no further trouble. I gave her an opiate, suitable stimulants, and she recovered without a single bad symptom.

It may be worth remarking, that on the previous occasions of her aborting the placenta came away without any delay, and without any hemorrhage.

Dr. Byrne exhibited the fetus and placenta, and also some plastic casts prepared by M. Auzou, of Paris, illustrating the size of the ovum and of the uterus at the period of pregnancy in which this miscarriage took place, and which showed the difficulty of introducing the fingers at this early period; and said that the case presented some points of practical interest, upon which, with the permission of the society, he would make a few remarks.

In pregnancy, at the full period, morbid adhesion of the placenta is not a circumstance which very frequently complicates labour; however, it occasionally happens, that from some change occurring in the mode of growth of the placenta to the uterine walls, or from placentitis, the result of accident or disease, that the union of it to the uterus becomes so dense that manual detachment and extraction become necessary,

either in consequence of sudden and severe hemorrhage, or from the naturally to be dreaded complications to which a retained placenta may give rise; hence the treatment of such cases has received a good deal of attention from obstetrical authors.

In Collins' work, which embraces the large number of 16,414 cases, there is only the small number of ten cases of what might fairly come under this term.

In Drs. M'Clintock and Hardy's collection of 6,634, there only occurred eleven of morbid adhesion; and in Drs. Sinclair and Johnston's report of 13,748 cases, during Dr. Shekleton's mastership of the Lying-in Hospital, there occurred twenty-seven.

This gives a total of about 1 in 766. Dr. Churchill has collected a very large number, viz., 329,670, and out of this morbid placental adhesion occurred in 68, or about 1 in 4,844.

These are cases, however, in which the pregnancy had advanced to its full period, or nearly so, and in which, of course, the placenta had undergone a corresponding proportional development, and where its remaining in utero would be attended with immediate danger to the life of the patient; and the rule of practice laid down is, that it must be removed by introducing the hand into the uterus, and extracting it in the most perfect manner possible.

In cases, however, such as that which I have read to the Society, viz., where the pregnancy is not far advanced, and where the uterus is small, the line of treatment has not been so clearly laid down by authors, and much perplexity and doubt exist as to the proper practice to adopt where the ovum has come away, and the placenta or secundines remain behind. In these cases either hemorrhage may or may not continue after the expulsion of the ovum; in the majority the hemorrhage generally ceases, and does not return; but in some, as in the instance related, the hemorrhage still goes on, notwithstanding the employment of all means used to suppress it.

In all cases where the ovum can be felt in the os uteri, and where it can be removed in its integrity, and without violence, the best practice is to remove it gently by one or two fingers—all contrivances in the way of instruments are to be avoided—the hemorrhage then generally ceases. In some cases, however, it is not possible to remove the ovum, and in others it is within the uterus and cannot be felt; under those circumstances, the tampon is the proper means to adopt, and no time should be lost, but the vagina must be plugged at once; the ovum, generally, comes away after the removal of the plug, and there is no further trouble; we may, however, be obliged to repeat the tampon.

. . . . .

In the management of the other classes of cases—that is, firstly—where the hemorrhage goes on after the escape of the ovum, on account of

some part of its coverings, or of the placenta, being left behind; secondly—where no hemorrhage is going on, but the placenta or membranes remain behind, much variety of opinion has prevailed as to the practice proper to be adopted, and it is almost impossible to arrive at a correct or satisfactory conclusion as to what should be done in those cases. Some recommend active interference, and extraction, either manual or instrumental, on account of the dread which they entertain of the effects produced by retention of the membranes; others do not attach any importance to this point.

As a proof of this, I shall quote some of the most distinguished authorities upon those subjects.

Denman says:—

"But whatever other pain or trouble may attend, the hemorrhage is the only immediately alarming symptom; I say immediately, because every practitioner must be convinced, that sometimes abortions either occasion local diseases, or the time of abortion is an era, from which we may date the commencement of some dangerous diseases of the uterus, or its appendages. It has also been imagined, that the safety of the patient very much depended upon the complete and speedy expulsion of the placenta; and when it was retained, very active deobstruent medicines, as they were called, were supposed to be necessary, and strenuously given for the purpose of expelling it, lest it should become putrid, and some of the putrefied particles be absorbed into the constitution. I believe the whole of this supposition is groundless, having seen many instances of its being expelled in a very putrid state at different periods of pregnancy, when the patient was in perfect health; and if she had any disease, the putridity of the placenta clearly seemed the consequence, not the cause, of the disease. At all events, much less mischief may be expected from the retention of a putrid placenta at this time, than from attempts to force it away by medicines usually given for that purpose, or by manual assistance."

Dr. Wainwright, of Liverpool, recommended, many years ago, the introduction of the fingers, but his recommendation does not seem to have found much favour.

Ramsbotham, in his work on Midwifery, page 683, inculcates the necessity of removing it, if possible, but says that at that period of pregnancy it is extremely difficult, in fact, impossible, to introduce the hand, and he places reliance upon the use of the tampon and ergot.

"Thus, then, it will be perceived, that in abortions attended with hemorrhage, our sole anxiety is for the well-being of the mother; and as the chief danger arises from the discharge, we must endeavour to restrain

it—first, by the measures ordinarily had recourse to; if they fail, we remove the ovum by the introduction of two or more fingers within the os uteri, provided that be practicable; should this, however, be impossible, we plug the vagina, or exhibit the ergot of rye, or use both means at the same time.

"It may happen, however, that the ovum may break,—that the fœtus may be expelled, and the placenta retained for days, weeks, and perhaps months. It is remarked, indeed, that in general the placenta of a young embryon is retained much longer than one belonging to a perfect fœtus; and so long as there is any portion of that mass in utero, so long the woman is not safe from flooding, and so long she is liable, also, to other dangers, more remote, but by no means despicable. It is, therefore, highly desirable, that when the embryon has passed, the placenta should be removed as speedily as possible; but this cannot be affected by the agency of the funis, for the cord is so tender that the least straining will cause it to break. We shall be equally unsuccessful in any attempts we may make to get it away by the introduction of the hand, for the uterine cavity is not large enough to admit the passage of the hand within it. Unless, then, it be lying partly in the vagina, so that we can embrace it between two fingers and draw it away, we must rely on those means best calculated to prevent hemorrhage, including the plug, and give the ergot of rye, in the hope of exciting the uterus to such efficient action as will eventually throw it off."

Burns, in his work, recommends manual removal only in cases where the hemorrhage is very profuse, and even then only when other treatment has disappointed us:—

"If the membranes have given way, and the fœtus be still retained, we may, by insinuating a finger within the uterus, cautiously, hook it out; or, in many cases it will be found, partly, expelled through the os uteri, and may easily be helped away. But the most tedious and troublesome case, generally, is that in which the fœtus has been expelled, but the secundines are still retained, under one of two circumstances; namely, either they are only partially detached, and still adherent to a certain extent, or there is a circular and spasmodic contraction of the uterine fibres around a portion of them, a state which may occur even before the fœtus itself be expelled. Now, we never can consider the patient as secure from hemorrhage, until these be thrown off, and therefore, she must be carefully watched, especially when gestation is considerably advanced. In a great majority of instances, the uterus within a few hours, contracts and expels them. But in some cases, the hemorrhage does become profuse, and there is little disposition to throw them off. By stuffing the vagina, we shall often find, that the dis-

charge is safely stopped, and the womb excited to act, in a short time; or, a warm saline clyster is to be given, of such strength as shall briskly stimulate the rectum, and excite sympathetically the uterus, or we may try the ergot, which sometimes has been of service, but, in other instances, has failed, and even produced distressing sickness. If we be disappointed, or the symptoms urgent, the finger must be introduced within the uterus, and the remains of the ovum slowly detached by very gentle motion. But we must be very careful not to endeavour to pull away the secundines, until they be fully loosened, for we thus leave part behind, which sometimes gives a great deal of trouble; and further, if we rashly endeavour to extract, we irritate the uterus, and are apt to excite inflammation, or a train of hysterical, and sometimes fatal symptoms. It is these two circumstances, which make me cautious in advising manual assistance; and, fortunately, the proportion of cases requiring it, is not great in abortion at an early period."

Mr. Dease, an Irish accoucheur and surgeon of eminence, in his obstetrical observations, regards the retention of the placenta as a matter to be avoided, on account of its dangerous consequences.

M. Velpeau, in his *Traite complet de l'art des Accouchmens*, says:—

"Le délivre ayant à peine changé de rapports lui-même avec la cavité qui le renferme, ne peut en franchir que difficilement l'orifice pour passer dans le vagin. D'un autre côté, le cordon est si faible qu'on ne peut exercer sur lui que de très légères tractions. Cependant la rétention du placenta n'est pas beaucoup moins fâcheuse après l'avortement qu'après accouchement à terme."

Velpeau disapproves of any instrumental interference, and contents himself with using his fingers; and although he characterizes as unpleasant and dangerous the consequences of leaving the placenta in the uterus, yet he says that in some cases the placenta has been known to remain a very long time in the uterus without putrefaction. He attributes the non-putrefaction to the circumstance of the neck of the uterus closing quickly about it. He says:—

"Je doute aussi que M. Dugès y ait sérieusement songé quand il a proposé pour le même but et pour entraîner des restes de délivre quelconque, *son anse de fil d'archal recourbée* en crochet ou en raclette. Agissant en aveugle, si la main ne peut pas les accompagner, de tels moyens seraient inutiles ou dangereux. Lorsque les doigts peuvent entrer dans l'utérus, au contraire, ils rendent superflus toute espèce de tige étrangère.

"Toutes ces précautions sont parfois inutiles. Si le col s'est renfermé promptement après la sortie du fœtus, le placenta peut rester un temps

assez long dans l'utérus sans se putréfier. On a vu des femmes l'oublier en quelque sorte, ne le rendre qu'au bout d'un ou de deux ans, être fécondées de nouveau, aller jusqu'à terme, et se débarrasser simultanément et de l'ancien et du nouveau délivre. C'est alors aussi qu'on a le plus souvent observé la résorption, réele ou apparente, du délivre ; c'est alors du moins, et seulement alors que j'ai cru l'avoir recontrée jusqu'ici."

He concurs with other writers in regarding retention of the membranes as a source of great danger, and to be avoided.

M. Cazeaux, explaining why, at the three and four months, the placenta is frequently retained, says :—

"Mais il n'en est pas du tout de même dans le troisième et le quatrième mois. A cette époque, en effet, le placenta, déjà volumineux, a contracté des adhérences très nombreuses et très intimes avec la matrice ; celle-ci n'a pas encore acquis toute la contractilité de tissu dont elle jouit au terme de la grossesse. Aussi les contractions prématurées qui se manifestent, assez énergiques pour briser l'œuf, ne le sont point assez pour détruire les adhérences utéro-placentaires."

And again, in detailing the treatment, he says :—

"Lorsque le placenta n'est pas complétement décollé, et que les tractions n'achèvent pas son décollement, on peut, si la dilatation du col le permet, introduire un doigt dans la cavité utérine, et chercher à le faire glisser entre la face externe du placenta et la face interne de l'utérus. Enfin, si l'on ne pouvait pas y parvenir, il faudrait appliquer le tampon et administrer le seigle ergoté. Il est bien rare que les deux moyens réunis n'arrêtent pas la perte et ne provoquent des contractions suffisantes pour expulser le délivre."

In writing of the danger of retained placenta he says :—

"Les choses ne se passent pas toujours aussi bien, et la rétention du délivre peut devenir la cause des accidents les plus graves. Quelquefois, en effet, le placenta, resté dans la cavité utérine, après avoir été décollé en partie ou en totalité, ne tarde pas à se décomposer comme s'il était exposé à l'air ; les lochies deviennent fétides ; les parois utérines, en contact avec des matières en putréfaction, en absorbent une partie ; la fièvre se déclare, et avec elle tous les accidents de l'empoisonnement putride."

Let us now endeavour to find out the treatment recommended to be adopted by some of the most recent obstetrical authorities and writers in this country and England.

Dr. Churchill, in his work on Midwifery, 3rd edition, page 167, says :—

"If the fœtus alone be expelled, we may wait awhile (if no flooding occurs) to see if the uterine efforts will detach the secundines; if not, perhaps we may be able to reach the lower portion of them with the finger, and gradually withdraw them; if this fail, we may frequently succeed with the ergot of rye.

"But there are many cases in which none of these plans will succeed. Are we then to leave the case to nature? We know that after a time the shell of the ovum will putrefy, dissolve, and be discharged; but experience proves that this process sometimes involves considerable danger; danger of hemorrage first, and afterwards of uterine phlebitis. I shall speak of the treatment in cases of flooding presently; and with regard to the danger of uterine phlebitis from absorption of a putrid ovum, it is often sufficiently imminent to warrant interference."

Dr. Churchill says also that he does not approve of the introduction of the fingers into the uterus to remove the placenta, unless the natural powers will not act even with the aid of ergot of rye. He disapproves of all the instruments used by the French accoucheurs, and prefers the fingers, but only in cases of great necessity, and he has great confidence in the tampon.

Sir James Simpson, in a paper read before the Medico-Chirurgical Society, 1844, recommended a small expanding sponge tent to be passed into the os uteri (in those *occasionally perplexing* cases where, in abortion, the embryo escapes but the secundines are long retained). He also details the history of a case of abortion in which hemorrhage proved fatal.

This line of practice, however, does not seem to have had many followers, and the vaginal tampon has been preferred.

Dr. Tyler Smith says:—"I have never seen any ill effects arise from such an introduction of the hand and finger." He also disapproves of all instruments invented for the purpose of removing the ovum and membranes, and prefers the fingers to them all, and says that a case can hardly occur in which they cannot be removed by the fingers.

Dr. Tanner, in his work on the Signs and Diseases of Pregnancy, recommends the fingers to be introduced to remove the membranes:—

"In cases where the fœtus is expelled alone, and the placenta and membranes do not at once follow, it may be advisable to wait about an hour—provided there is no bleeding—to allow the uterus to throw them off spontaneously. If this practice fails, attempts must be made to remove the structures. The ergot of rye will often excite contrac-

tions, and cause the uterus to empty itself; or two of the fingers may be introduced into the uterine cavity, and the mass taken hold of; or a pair of slender forceps, deeply grooved at the extremity, may be gently passed, and the substance seized and withdrawn. Galvanism may also occasionally be resorted to, in the place of these measures; the positive pole of the battery being applied to the upper part of the spine, and the negative to the cervix uteri through a glass tube. In every instance stimulants should be freely administered if the woman be much exhausted; and she should not be left until the hemorrhage has been controlled, and the system has rallied."

One of the most recent writers upon this subject, Dr. Priestly, in the 3rd volume of the *London Obstetrical Transactions*, has written a most able and exhaustive paper on this subject. In this paper he has collected together all the opinions, almost, which it is possible to gather, and has left no channel of information unexplored. He has shown clearly that not only may the hemorrhage in some cases be so great as to threaten dissolution, but that the retention of the placenta or membranes, or a portion of them, may lead to the most serious consequences. Thus, the hemorrhage at the time may be so profuse, that the patient's life is in imminent jeopardy; or even although it is arrested for the time, yet the pieces of retained placenta or membranes act as a foreign body, and repeated attacks of secondary hemorrhage take place, which reduce the patient very much. Third—Phlebitis may arise, either of a fatal kind, or may lead to local derangements, such as phlegmasia dolens. And Fourth—Fatal effects may result from absorption and pyemia. Fifth—Subinvolution of the uterus may occur. Sixth—Formation of moles may be a result.

The result of his experiences, therefore, is, that not only is it necessary in all cases to remove it, but he insists that he has never seen any dangerous consequences follow the cautious introduction of the fingers, and he says that the best results may be expected to follow; nay, he even suggests this should be done in cases where the accoucheur is not called in for some time after the abortion has taken place; and where, from the history of the case, from the frequent attacks of hemorrhage and discharge of putrid fluid, he has reason to fear that some of the membranes are left behind; he also advises the use of sponge tents to dilate the os uteri in those cases, should it be necessary, except there be symptoms indicative of inflammation being present in the uterus or the tissues in the neighbourhood.

We thus perceive that there is a great difference of opinion amongst obstetricians as to the exact treatment for retention of a placenta, after an abortion at this stage of pregnancy. Almost all, with the exception of Denman, regard as a most serious matter the true separation of the placenta and its continuance in the uterus, and justly so, I think, for the reasons already mentioned; but the majority of them regard much inter-

ference as dangerous also. In this country removal by instruments may be said to be altogether discarded; and it is quite proper that this should be the case, for we can never estimate the danger that may result from the application of an instrument within the uterus, where we cannot see nor feel what we grasp in it. In France neither Velpeau nor Cazeaux approve of instrumental interference, nor do any of the authorities now recommend this course.

The only case in which I think we would be warranted in using any instrument is where the placenta would be lying loose in the cavity; but in this case the fingers would answer all the purposes, and would be far less dangerous. Where it would be adherent to the uterine walls, any attempt to remove it by instruments would be attended with great risk.

The question then, I think, becomes narrowed into a small compass, viz., whether, under either of the accompanying conditions, the retained placenta, *i.e.*, whether there be hemorrhage or not, we should remove it by introducing one or more fingers. We see that Wainwright, Tyler Smith, Tanner, Priestly, and Velpeau, see no objection to the introduction of one or two fingers into the uterus, and separating it from the uterine walls, and are strong advocates for this treatment, whilst all the others prefer rather to temporize, and trust in the plug and the administration of Ergot of Rye, and sanction the introduction of the fingers only where these remedies fail.

From the experience of the case which I have detailed, and from the difficulty I found in dilating the contracted os and cervix uteri, and introducing my fingers into the uterus, and operating in so small a space, and of separating the placenta, and from the fear which I entertained that I might do some injury to the uterus, I certainly feel that I would be inclined, should I meet a similar case, to try the effect of plugging the vagina, and wait to see the effects; but, at the same time, should this not succeed, I would have no hesitation in introducing my hand into the vagina, and pass my fingers into the uterus, and endeavour in this way to separate the placenta.—*9th February.*

Dr. Kidd exhibited the cephalotribe made for him by Messrs. Fannin, as described in his paper read at the previous meeting, and detailed a further case of cephalotripsy.—*9th February—published* vol. xliii., p. 333.

Dr. Denham exhibited a large mass of fibrous tumours, involving the uterus, removed by abdominal section.—*9th March.*

### *Hematemesis in an Infant.* By Dr. S. L. Hardy.

Hematemesis is one of the complaints which we very seldom meet with during childhood. In his work on the Diseases of Infancy and

Childhood, Dr. West observes:—"Among those rare diseases, too seldom met with for any person to have what can be called real experience about them, may be mentioned the vomiting and purging of blood occasionally observed in infants and young children."

On the 1st of October last I attended a lady in her fourth confinement. Her labour was easy and short, and terminated at a little before midnight. The child, a male, was large, well formed, and, to all appearance, perfectly healthy. In a few hours after birth its bowels were moved naturally, without its having any medicine; the discharge being such as is usual with new-born infants. Eight hours after its birth the child vomited about a tea-spoonful of fluid blood; this was followed by large quantities of clots and blood in a fluid state, ejected from the stomach at irregular intervals until four o'clock in the evening of the 2nd (sixteen hours after birth), when blood, fluid and in clots, was also expelled from the bowels very largely. This loss continued copiously at first, then gradually diminished until four o'clock on the evening of the 3rd, when it entirely ceased. Being, from first to last of the attack, about thirty-two hours duration. Extreme prostration was very strongly depicted in the appearance of the infant; it lay perfectly languid and pale, but did not seem in the least to have any suffering from pain; most of the time it slept quietly. To nourish it and keep up the strength, wine whey was regularly given—it was too feeble to suck the breast.

On the fifth day, at 9 a.m., the child took the breast vigorously, and had improved amazingly; at noon the bowels acted spontaneously, the motion being perfectly natural, and without any traces of blood in it. From this time it recovered steadily, without any untoward symptom.

There was no cause whatever during the labour or after delivery to account for this very severe attack. It was very remarkable for its suddenness, coming on without any previous symptom, and for the astonishing amount of blood which was lost in so short a time, without causing the death of the infant. I don't in the least exaggerate, when I say the napkins taken from the child were saturated with blood, and contained an amount of clots sufficient to fill an evening tea-cup, repeatedly.

When my attention was first directed to the hemorrhage, I made a very particular examination of the nose, mouth, and fauces, but could find no bleeding vessel. It then appeared quite clear that it must come from the stomach, or from some neighbouring organ discharging its vessels into it. The treatment I adopted was Ruspini's styptic, which I gave at first, afterwards I added the tincture of larch bark. Both those medicines are agreeable, and easily taken by an infant. According to Dr. A. T. Thompson, Ruspini's styptic consists of gallic acid, a small portion of sulphate of zinc and of opium, dissolved in a mixture of alcohol and rose-water, so that it is requisite to observe caution in administering it to very young infants, owing to its containing opium.

The tincture of larch bark is a very efficient and agreeable styptic. I directed attention to it in a paper in the *Dublin Hospital Gazette* for January, 1859, as a remedy in the treatment of purpura hemorrhagica, which prevailed during the months of August and September, 1858. Many cases were treated in the institution for diseases of children with this medicine, and rapidly got well, some of them after other remedies had failed. In a case of hematemesis in a middle aged woman, which came under my care at the same time, it was given with equal benefit.

Dr. West mentions having seen three cases of hematemesis in children. They were all boys. The first was attacked when about a day old; he never throve afterwards, and at length died at the age of six months. The second was ten weeks old when taken ill; it never quite recovered, and at length died, after an attack of diarrhea, from sudden hemorrhage into the arachnoid. The third was ten months old. It also died some time after of head symptoms, never having been strong.

This day, April 13, I vaccinated the child, whose case is the subject of this communication. He is now more than six months old—has put on fat, and is thriving well.—13*th April*, 1867.

Dr. Walsh read two cases of ovariotomy.—13*th April*, 1867.

*On Fever Complicated with Pregnancy.* By Henry Kennedy, A.B., M.B., M.R.I.A.; one of the Physicians of the Cork-street Hospital; and attached to Sir P. Dun's.

Fever presents itself to our notice under a great variety of phases. To one of these—where disease occurs during the pregnant state—I would ask your attention this evening. In the course of years a large number of cases of the kind have come under my notice; and it seems to me very essential that the practitioner should be thoroughly conversant with them. Taking into consideration the state of the patient when the fever commences, there must naturally be some anxiety as to the result both to mother and child. And yet, in one sense, there are not grounds for this anxiety, as a very large proportion of these cases ultimately do well. Indeed, it is often a matter of wonder what serious symptoms will be present, and yet the patients recover. But before making any further remarks of a general kind, it will probably be well to sketch very briefly a few of the cases, and by this means a clearer idea of the subject will be obtained.

Case I.—Mrs. H., the mother of seven children, was admitted into Sir P. Dun's Hospital in August, 1853. She was now twelve days ill. Her fever began with symptoms of great urgency, violent headache, rapid pulse, sick stomach, and hot skin. There was also great restlessness. On the fourth day of this attack she miscarried, at about the third

month. From the account given this event seemed to have lowered her fever somewhat. But it now went on of a much lower type than at the commencement, and she got wine from the time she was admitted to hospital. When now three days in, the nurse reported she had a kind of fit, which seemed to have been of an hysterical character, and during which she was insensible, and the right arm worked a good deal. She subsequently, however, made a good, though slow recovery, her fever lasting very nearly twenty days.

Case II.—Ward, aged twenty-two, admitted into Cork-street Hospital in June, 1853, labouring under fever; on the fifth and sixth days of which her nose bled sharply. Though the symptoms which this patient presented were not serious, still her fever ran very high; and on the 1st of July, when now eleven days at least ill, she miscarried, at about the third month. This seemed to serve the fever much, for she made a very rapid recovery. Till the miscarriage occurred her pregnancy was not known.

Case III.—Robinson, a large fat woman, married five months; came in labouring under fever, and complaining of severe pain in the back. Her fever did not present any marked feature till the eighth day, when she miscarried; and within the next twenty-four hours a profuse sweat occurred, which seemed at once to prove critical, and she made a rapid recovery.

Case IV.—Hogan, aged thirty-five, came in with what seemed to be very light fever; she was six months pregnant. I confess I was surprised to find that on the ninth day she miscarried. For four days subsequent to this she was doing well. At this time, however, she relapsed. Fever, with much higher symptoms than at first, appeared, and was particularly marked by very obstinate vomiting. This, however, though enough to keep me anxious for two days, then subsided, and the patient made a good though slow recovery.

Case V.—A woman of colour, five months pregnant, came in with fever. She seemed ill enough to be spotted, but her colour prevented me seeing them. On the eighth, or possibly the ninth day, she miscarried of twins. One of these, a female, partook of the mother's character, being coloured; the other, a male, was white, but had some spots like purpura, close to one knee. This patient, like the last, did well for some days after the miscarriage. She then relapsed, became most seriously ill, her life being in the balance for many days. After a very prolonged illness, however, she recovered.

Some explanation, I presume, can be given of the difference in colour of the twins, but I will leave it to others to explain the fact.

Case VI.—Carleton, aged twenty-one, was sent in by Dr. Kidd from the Coombe Hospital, in July, 1866. She had been confined eight days previously, and within forty-eight hours of her confinement had been seized with symptoms of fever. When first seen in Cork-street her pulse was 126; the tongue that of a person in heavy typhus; the skin very hot, but there were no spots. The abdomen was tympanitic, and yet she bore pressure tolerably well. The lochia were present in very small quantity, as was also the milk. Her person emitted a very heavy smell. She was treated with barm, wine, and a poultice to the abdomen. She continued much in the same way for three days, her nights being very restless, even though she got an anodyne. At last, on the fourth morning, it was found that the pulse had fallen to 106, and the other symptoms bettered likewise. In this comparatively improved condition she remained two days, when the fever suddenly, and without any cause I could make out, rose again as high as at first. She had now, too, and for the first time, distinct pain over the left ovary. The tongue had become red and dry, and the skin much hotter than on the previous day. The former treatment was continued, and, in addition, leeches were twice applied to the painful part. Two days later I found her in a profuse sweat, her pulse fallen, and her tongue moist; and as she had still pain in the abdomen she was ordered Dover's powder in ten grain doses. Under this plan, and, as I believe, in great part due to the critical sweat, the fever subsided, and the patient made a very rapid recovery. The duration of this case was fifteen days, and from the time of her confinement seventeen days. There will be occasion to advert to it again.

Case VII.—Baker, aged thirty-five, was admitted to the Cork-street Hospital ten days after her confinement. She had, on admission, very heavy fever, and her mind was much excited, her eyes having a very wild expression. In fact she had much the appearance of a person labouring under puerperal mania. Her pulse was 130, and her tongue dry and brown. She seemed to have no pain on pressing the abdomen, nor was there any tympany. She was treated with barm, and she got a full anodyne at night. She had also wine. Under this plan the patient, though at first a very unpromising case, came steadily round.

Case VIII.—In September, 1866, White, a woman of twenty-eight, was admitted with fever of the gastric type, and in a very severe form. On the eighth day of her illness she miscarried, at about three and a-half months. This was attended with very little loss. Four days later, that is, when twelve days ill, the following note was made:—"Great distress; tongue very red and furred; respiration hurried; pulse 140; no pain on pressing abdomen, nor any spots." She was ordered barm and eight ounces of wine. Next day, thirteenth day of the fever, symptoms much

the same. But she had no sleep whatever, owing to a sharp attack of both vomiting and purging which came on during the night. It will be recollected that this case occurred when the late epidemic of cholera was at its height. Her respiration was still hurried, and the nares were acting, though no mischief could be detected in the chest. From this out the fever became well-marked typhoid; the spots of this type of fever appeared, and the diarrhea was very characteristic, and proved most obstinate. It was, however, finally subdued, and the patient made a good though slow recovery.

Case IX.—Parks, aged thirty-four, was admitted labouring under fever. She was a thin delicate person, and her fever did not present any feature which would lead one to dread danger. She was more than two months pregnant. In the course of four days, however, the fever put on a very much more serious character, having assumed all the signs of typhus. In this state, and when now about ten days ill, she miscarried, but this was not attended with any loss. Still the event seemed to produce a shock from which she could scarcely be said to have rallied, for she died nineteen hours afterwards, and somewhat suddenly. This case, which occurred several years back, I was unable to offer any explanation of at the time. No *post-mortem* examination could be obtained. Now, however, it appears to me very probable that the patient had a weak and possibly dilated heart.

It was my intention to have introduced here some cases in which, while pregnancy existed, and fever, still miscarriage did not occur. I have notes of several such cases; some presenting features of much interest. I find, however, that their detail would occupy an unreasonable length of time of the meeting, and must therefore pass them by. I may just observe, in passing, that one such case I saw with my friend Dr. Shannon; and I allude to it here because the type of the fever was typhoid, being very well marked and of a severe character. Yet the lady, who was about five months pregnant, passed the fever well, and went on to her full time. Such cases I take to be rare; I have notes of three, of whom two miscarried; and such an event, I guess, must be almost natural, on account of the violent diarrhea which marks this type of fever.

Case X.—Maguire, aged thirty-six, but looking older, admitted when she must have been several days ill of typhus fever. On the second day from admission she gave birth to a living child, her seventh. Subsequent to this the fever put on still more serious symptoms. The pulse rose to upwards of 130; skin became very hot; tympany set in, but not apparently any pain on pressure, and there was a total absence of milk

and the lochia. I confess I looked upon the case as hopeless. Yet she recovered, though her recovery was of the very slowest. The next case was of a different kind from any yet described.

Case XI.—Doyle, aged twenty-six, six months pregnant of her first child, was admitted labouring under fever of a very severe type, as shown by her tongue, eyes, heat of skin, and rapid pulse. She had also the most urgent dyspnea, preventing her entirely from lying down. The feet and legs were slightly swelled, as was also her face about the eyes. I could detect nothing wrong in her chest, but the respiration was intensely puerile. In this state of great distress she continued four days and nights, her position constantly being that of sitting on the side of the bed with her feet propped up. The case was so urgent that I had got my colleague Dr. Mason to see her, with the idea that we might be driven to bring on delivery, when at this juncture signs of it came on, and she was shortly delivered of a dead child. After this event she was able to lie down, but the fever rose to a very great height, the pulse being full and bounding, and tympany coming on, but no pain on pressure. This state continued for some days, during all which time there was a regular struggle for life. Finally, however, she recovered, though it was not what would be called a good recovery, for when she left hospital she was still delicate.

Case XII.—In December, 1860, a woman named Daly was admitted into Sir P. Dun's Hospital. She reckoned she was within three weeks of her confinement, and stated that a month previously she had been for some days in the Britain-street Hospital for an affection which seemed to have been an abscess of the vagina. It was with very great trouble she was carried into the hospital, for the gentlest motion caused a degree of agony which I have rarely seen equalled. All her suffering was, I found, referred to the dorsum of the right foot and the right elbow joint; of the two the foot was the worst. With this suffering there was the very highest fever, and great distress, with anxiety of countenance. There was no great swelling of either the foot or elbow; but there was some, and the increase of temperature was very marked. As a good deal of obscurity hung over this case, I was very glad to be able to avail myself of the able assistance of Professor Robert Smith, who advised leeches to the affected parts; small doses of blue pill, and opium in such doses as would allay pain. This plan was steadily carried out for three days, but with comparatively little relief to the patient's sufferings. At the end of this time, and as it seemed likely that pus had formed on the dorsum of the foot, Dr. Smith made an incision; no pus was found, and yet the incision was followed by marked relief. It was now determined that the mercury should be pushed so as to produce its specific effects. As they became evident the

patient's sufferings declined, and when salivation came on she was nearly free of all pain, and in another week was completely so; and the patient made then a very rapid recovery. It is more than probable, and so Dr. Smith thought, that it was the periosteum alone was engaged in this case. In connexion with it the following seems specially worthy of detail, though the result was not so fortunate.

Case XIII.—Quinlan, aged twenty-six, five months pregnant, admitted into the Cork-street Hospital in January, 1852, under the care of the late Dr. G. Kennedy. The patient had fever of a very high character, and of the inflammatory type. The pulse was 130, and bounding, and the skin remarkably hot. There was great distress and anxiety; her breathing was hurried, and she complained of very severe pains in her back and down the lower extremities. It was clear, even at the very first visit, that there was something unusual in the case. The stethoscope detected nothing wrong in the chest. In this state the patient went on six days, not in any way, however, improving, still suffering greatly from severe pains; her breathing being laboured and her nights very bad, in spite of anodynes. The fever at this period ran so high, and her pulse continued so full and bounding, that it was determined to bleed her, and eight ounces of blood were taken. This gave some relief, but only for a few hours. The blood was, in an extreme degree, buffed and cupped. Thirty hours after the bleeding the patient miscarried, and with very little loss. This event, however, so far from improving the state of the patient, only seemed to make matters worse. The fever changed its character; tympany appeared; the pains, so general before, now became localized to the joints; some of which swelled; and now, also, I detected signs of pneumonia in left lung. Though looked for daily, no signs had previously been detected. In this state, and with some new joint complained of each day, this poor patient held out for many days longer. Finally, the large joint of each great toe suddenly swelled. This was attended with the most exquisite suffering, and in the course of a few hours by redness over each joint; and literally within thirty hours from the time swelling first showed itself, both joints had burst and given exit to a quantity of ill-formed pus. It is almost needless to add that with such accumulated suffering the patient sunk. The entire illness of this patient must have occupied little short of twenty-six days.

The two last cases given belong to a class of affections in connexion with pregnancy which it is of no little moment to recognize. I need scarcely observe that it is but a modification of this disease from which her Royal Highness the Princess of Wales is at the present moment suffering, and I confess to having misgivings as to its result, notwithstanding the strong promises given of her recovery, a stiff joint being much to be dreaded. I am happy, however, in being able to say that

this affection is, comparatively speaking, known to the profession in Dublin; and in proof of this I would refer to the highly practical volume lately published by a member of this Society—Dr. Beatty.

For so far I have been speaking of the occurrence of common fever as a complication of pregnancy. But it is, of course, well known that any of the specific fevers may also occur in this same state. Of these scarlatina seems to be by far the most common, but it also occurs with small pox and measles, though I have not chanced to meet measles and pregnancy in the same patient at the same time. The following case of small pox is, however, worth giving:—

Case XIV.—A girl of twenty-three years of age, and unmarried, was admitted labouring under what seemed to be fever of a severe kind. She was very near her confinement. Her illness turned out to be small-pox, and then it was ascertained she had never been vaccinated. The disease became rapidly confluent, and the swelling which usually attends it was very great. Whilst in this state her labour came on and was not attended by any untoward event. Still matters did not mend; the fever got of a much worse character; her brain became engaged, and she died two days subsequent to her confinement—as pitiable an object as it has ever been my lot to witness. I will close the detail of cases with an account of two cases of scarlatina complicating pregnancy.

Case XV.—M'Donnell, aged thirty, was admitted to the Cork-street Hospital labouring under scarlatina, and many, if not not all the signs of puerperal fever with it. It was the fifth day from her being confined. Her labour was, I understood, natural. When I first saw her she lay utterly prostrated, and her look was quite in keeping with her position in bed. She was covered with the bright rash of scarlatina, but made no complaint, even when asked, of her throat. The abdomen was very tympanitic, and pressure in some parts caused her pain. Her pulse was 130, very feeble, and the bowels were too free. In addition to these grave symptoms, however, some of the joints, as the wrist, ankles, &c., were swollen and exquisitely painful, and there was a patch of redness, like erysipelas, on the outside of the right leg. Matters did not improve in any respect with the patient. A tendency to stupor showed itself; The right wrist, which had been swollen from the first, increased greatly, the swelling extending up the arm, and involving even the scapula; the breathing then got hurried, and so this poor woman sunk—the tenth day from her confinement and the fifth from her admission to hospital. The bowels continued too free to the last.

Case XVI.—Dixon, a woman of thirty, was confined on Thursday, 11th July, 1852, and four days later was admitted to hospital labouring

under scarlatina, the symptoms of which began the day after her confinement by violent vomiting. When first seen in hospital she was heavy and stupid, could not put out her tongue, and had passed under her. Her body was covered with a bright red rash, which was, however, very dark on the inguinal regions, very like purpura. The uterus felt large and the belly tympanitic, and there were no signs of either the lochia or milk. Pulse was 130. She got wine, and barley water acidulated with dilute muriatic acid. On the next day the symptoms were much the same, except that a tendency to diarrhea now existed, and, besides excoriation of the pudendum, there was also extensive stripping of the right elbow, on which a very large blister seemed to have formed, and then rubbed off, leaving the true skin of a dark livid colour. She was now ordered barm, and the wine was continued, and the following day some signs of amendment showed themselves, as she now put out her tongue, and the pulse had fallen. It is enough to add from this out the patient began to mend, and finally made a good though slow recovery—a result which it has never been my lot to see in any similar instance, for the disease here was of the most malignant character. In connexion with this subject the meeting may remember a paper of great interest read some time back by Dr. M'Clintock, in which the results of treatment were very satisfactory. The cases, however, did not appear to me to be of the same severe character with the one detailed.

In concluding this paper I would make a few general remarks on the subject. In the first place, it may be observed that the occurrence of fever with pregnancy can scarcely be looked upon as a very serious affection to the mother. In other words, the mortality in this state is very small. Indeed, I cannot doubt that I have seen several cases where the abortion or the miscarriage—as the case might be—proved critical, the fever after it declining with great rapidity. On the other hand, when the child was retained, the fever ran out to the usual length. It may, I think, too, be further stated that the fever which attacks pregnant women is rarely typhus, the cases where spots appear being far in a way exceptional. Still cases do occur—and some have been given this evening—where both typhus and typhoid were the types of fever present. I need scarcely add that when this is so the case is the more serious. It has often appeared to me as if the pregnant state were not obnoxious to the more severe types of fever. The symptoms may be, and often are, most urgent, and yet the mortality is, as a whole, small. Whilst speaking thus it is but right to notice those exceptional cases, some of which have been given, and where not only danger to the mother, but loss of life occurred. These cases almost all belong to the class of affections which come under the denomination of diffuse inflammation; but I have not time to enter into this part of the subject here,

further than to say that the disease, in some cases at least, precedes the occurrence of miscarriage or delivery at the full time. I think I have heard practitioners in midwifery say that puerperal fever sometimes exists before the birth of the child. All such cases are necessarily most serious, and frequently very obscure. The two cases given this evening, in which the joints were attacked, bear out this statement.

On the subject of the treatment of fever occurring during pregnancy I have little to say. It is, I believe, a good rule not to allow the pregnancy to alter the treatment which the symptoms present may demand. A treatment guided by a common discretion runs no risk, I believe, of inducing miscarriage; and when this event does occur it is due to the intensity of the fever. This, at least, has been my experience on the point. There is, however, one class of cases in which pregnancy ought, I think, to modify our treatment, not by making it more time-serving, if I may so call it, but by making it more active—I mean where, with the ordinary signs of fever, the brain is the organ chiefly engaged, though from want of space no cases of this kind have been detailed. I have met several, in which the suffering referred to the brain was very great, indeed, so much so as to lead me to dread convulsions. This, however, I have not seen. Such cases have been treated chiefly by leeching the head[a] freely, and also by small doses of tartar emetic. Nor am I at all sure but I have seen cases where benefit would have arisen if blood had been taken from the arm. There is such a feeling now-a-days against such a mode of treatment that I have not, however, put it in force. In those cases where the type of the fever was typhus, and more particularly where petechiæ were present I have used barm, and, as I believe, with marked benefit. On the other hand, where the fever was typhoid, the treatment of which enough has been stated in another place, was adopted. As to the management of those cases where, in conjunction with pregnancy, the joints become engaged, I fear little can be done. If several joints be engaged, the case, as far as I am aware, has ended fatally. But if only one or two are involved, as is the case with the Princess of Wales, the

[a] The following case, though of a somewhat different character to those alluded to above, is worth noting here :—Behan, a woman of thirty, of a sanguineous temperament, was admitted to hospital on 20th April, 1867. She is four months pregnant ; has very high fever, attended by well marked spinal arachnitis, the head being forcibly drawn backwards and fixed. She had a marked frown on her forehead, and complained much of pain through the head and in the nape of the neck. There were a few indistinct petechial spots, chiefly on the chest. Leeches were directed to the head and nape, and she was put on doses of grey powder every third hour. But though this plan has been pursued till her mouth got sore, it does not seem to have conquered the disease. The pain lessened a little at first, but then recurred, and she still suffers much from her head ; while the fever keeps up, but not so high as at first. She is much worse at night. After getting much better of the head and spinal symptoms, the patient got erysipelas of the head and face, which proved fatal.

treatment has yet to be determined. In such cases, when they do recover, the joint, I believe, becomes anchylosed. It seems to me a question whether, in such circumstances, mercury, used so as to produce its specific effects, and at an early stage of the attack might not prevent such a result. In one of the cases detailed this evening, where the elbow and upper part of the foot were engaged, and where the suffering was very great, mercury produced a most beneficial effect. But time prevents me from entering farther into the question here.

In the last place, I would observe the cases detailed prove that we may have fever in connexion with pregnancy, which has nothing in common with puerperal fever. It is true, in some of them very great difficulty existed in determining the question. The case sent in by Dr. Kidd was a marked example of this kind; and I have seen several others. But in the great majority of instances no difficulty of the sort existed; and the small mortality tends to confirm the point. I must add, too, it has often struck me as strange that puerperal fever did not show itself in at least some of the patients. Here were women, who at the height of a fever miscarried, or were delivered at the full time, and who, it will be recollected, were surrounded by a fever atmosphere, and yet the fever, peculiar to their state, did not develope itself. Truly, we have much yet to learn on the subject of contagion. Indeed my own conviction is, and it has not been hastily taken up, that puerperal fever arises commonly from causes within, and not without, the individual; and that those who would shut up institutions like the one we are now in, and necessarily overlook the great benefits they confer on the poor, and this on the plea of contagion existing within them, commit a grave mistake. The same line of argument would do away all our hospitals and charitable institutions, inasmuch as they are all, in turn, visited by contagious diseases. But this part of the subject is beside the more immediate object of this paper, and cannot be further pursued here.—11*th May*, 1867.

*Case of Early Abortion—Retention of the Placenta and Phlebitis.* By Henry J. K. Gogarty, F.R.C.S.I.

On the 15th of January I was sent for to see Mrs. C., aged thirty-two, mother of eight children. Her history is as follows:—

On the 2nd of January, while going down stairs (being then a little over three months pregnant), she was frightened by one of her children receiving an injury, and from that moment until the following evening she experienced severe pain in the back, a dragging sensation in the loins, and a feeling of sinking. She aborted the night of the 3rd. The fetus came away without much effort of the uterus, but both the medical attendant and nurse were surprised that the secundines did not pass in a reasonable time. There was very little hemorrhage, and that that did

exist was controlled by the application of cold to the vulva. The medical gentleman now made a vaginal examination to ascertain the exact condition of matters, and failed in detecting, as he expected, the placenta in the os uteri. He administered forty grains of ergot within an hour without effect. Believing that there was no disposition on the part of the uterus to get rid of its contents, and no hemorrhage being present, he trusted the case to nature, and left, desiring the nurse to examine the lochial discharge minutely, and report to him the exact consistence of it. The discharge was very scanty, and disappeared entirely the next day, so that there was no time for the more solid elements of the placenta to dissolve and come away.

The patient apparently had escaped all mischief, and was up about her bedroom for four days, when she was suddenly seized with a fainting fit, and carried to bed; on recovering consciousness she found the left leg stiff and painful.

At this stage of her illness I first saw her, twelve days after the abortion.

She suffered from great and general irritability, and severe pain in the calf, and complained of weakness, thirst, loss of appetite, and sleep. Her pulse was quick and weak, 132 in the minute; tongue coated; skin dry and hot; bowels confined; urine scanty.

In examining the leg I found the temperature diminished; no swelling or increase of size; it was stiff and semiflexed; the posterior tibial vessels were exquisitely tender to the touch, and extension of the limb caused her considerable pain. From the suddenness of the attack and the diminution of temperature, I at first inclined to the opinion that an embolus had become dislodged from some of the hypogastric vessels, but subsequently unmistakable evidence of phlebitis showed itself in the extension of the inflammation to the popliteal and inferior part of femoral veins. The temperature of the limb gradually increased, until it considerably exceeded the natural standard; the vessels became swollen and cord-like to the touch.

The treatment adopted was small doses of calomel and James' powder, so as speedily to affect the gums; opium to relieve pain and procure sleep; wine and strong extract of beef. Locally, poppy head stupes, hot fomentation, and elevation of the limb.

In a few days, under this treatment, the inflammatory and febrile symptoms subsided, leaving the affected vessels apparently thickened. She was then put on chlorate of potash, with bark and dilute citrine ointment rubbed into the course of the vessels.

Although the local symptoms had almost entirely disappeared, yet her strength did not recover as rapidly as one would wish, and she remained in a weakly condition, very fretful and low spirited, without any disposition to sleep or take nourishment.

On the 27th, finding no visible improvement, I requested Dr. Kidd to see her with me. He examined her very carefully, and considered there was a probability of the symptoms merging into pyemia.

She was now changed into a more airy apartment, and ordered nitro-hydrochloric acid with bark, her wine and beef extract to be continued.

She remained four days in the balance, and at last showed some inclination to recover; her spirits became more buoyant; she slept better, and expressed a wish for solid food; she got some wild fowl, and from this time gained strength every day, so that on the 7th of February she was able to be removed to the suburbs.

During the transit she caught cold, shivered, and on the 9th I was again sent for to see her.

This occasion she complained of pain and stiffness in the left groin. The crural portion of femoral vein was swelled thick and hard, the inflammation passing from above downwards, involving the upper two-thirds of the vessel. The leg rapidly enlarged, becoming twice the circumference of its fellow; it also was tense, white, and shining, evidently a true type of phlegmasia dolens.

She was ordered small doses of grey powder and Dover's powder; leeches applied to the inflamed vessel, followed by hot fomentation and linseed poulticing.

On the 14th the phlebtis again subsided, and on this date she was put on iodide of potassium and bark, stimulating embrocations, and bandaging to be applied to the leg from the toes to the groin.

She went on satisfactorily until the 25th, when she was permitted to get out of bed, and recline on a couch, wearing her web roller as a measure of precaution against the swelling. Her convalescence continued undisturbed, and early in March she again undertook her household duties.

It may be seen by the foregoing case that the placenta never came away per vaginam, being in this respect analogous to that verbally communicated to this Society in February last by Dr. Beatty, and which occurred in a lady under his and the late Professor Montgomery's care. But his patient was fortunate in escaping the untoward results consequent on such an accident.

It would appear that permanent retention of the placenta (if it may be so called) has engaged the attention of British accoucheurs but slightly, and it is to the French and American authors we owe the most of our knowledge on this subject.

M. Colombat De L'Isère, in his valuable treatise on the diseases and special hygiene of females, speaks of it in the following manner. He says it sometimes happens when the fetus is expelled from the uterus that the secundines are retained by adhesion, and continue to live and be developed. It is precisely in such cases that fleshy moles are formed.

Dr. Henry Bond, of Philadelphia, treats the subject very fully in an article on extraction of retained placenta in abortion, which appeared in the April number of the *American Journal of Medical Science* for 1844.

It has also been noticed at some length by Baudelocque and Dr. Dewees of Pennsylvania. The former says if there are cases of uterine hemorrhage which we may be compelled to commit the delivery of the placenta to nature, and to acknowledge the insufficiency of art, they most frequently occur in cases of abortion, since for operating in such cases we have almost none of the resources that are available when retained placenta and flooding occur at the full period of utero gestation.

Dr. Dewees remarks in his paragraph on the subject:—I have ever found in such cases much effort is required to expel the secundines, nor need we be much surprised at this when we recollect the strong disposition the uterus has to close at this period of utero gestation. Indeed, I have repeatedly witnessed most alarming flooding from this cause (retained placenta), and I am certain that this occurred from the presence of the placenta, as the discharge always ceased as soon as this mass was removed. When the hemorrhage is thus maintained we should remove the placenta as soon as possible; but this is the difficulty. In such cases he says he has used, with the most entire success, his small wire crotchet, and in those cases where it was used it was the means of saving the patient's life.

The only British authors with which I am acquainted who have treated this subject at length are Dr. Matthews Duncan, of Edinburgh, and Dr. Priestley, of London.

The former gentleman, in an article on fetid uterine discharges in the *Edinburgh Medical Journal* for 1863, points out the deleterious influence of retained secundines even at a very remote period from the date of abortion. He illustrates his views on this subject by carefully taken and well authenticated cases, and recommends the complete evacuation of the offending structures from the interior of the uterus by means of the sponge tent, polypus forceps, and double catheter injection apparatus.

Dr. Priestley, in his paper on the treatment of cases of abortion in which the placenta and membranes are retained, read before the Obstetrical Society of London in 1861, and published in the third volume of the Society's Transactions of same year, gives some very interesting cases in which removal by Mr. Wainwright's plan of manual extraction was followed by the happiest results, and his patients were relieved from a long train of repeated hemorrhages.

Dr. Tyler Smith gives his sanction to this method of removal, and states that when necessary there need be no hesitation in introducing "the hand into the vagina in order to get the finger into the uterus." He further states:—"I have never seen any ill effects arise from such an introduction of the hand and finger."

According to Mr. Whitehead's statistics of the Manchester Lying-in Hospital, abortion occurs most frequently in females who suffer from what they term inward weakness, impaired health, and acute disease. Out of 1,200 cases of abortion recorded by him, something more than 900 occurred from the above-mentioned causes. We may naturally conclude that a woman who suffers from any one of these three conditions must be more or less debilitated from the weakening nature of those maladies, and therefore an unfavourable subject for continuous or excessive hemorrhage, or for putrescent absorption giving rise to phlebitis, peritonitis, pyemia, and typhoid sinking. As hemorrhage and putrefaction are the two great evils to be feared in retained placenta, I think it becomes the duty of the accoucheur to employ all justifiable means at his command to rescue his patient from the dangers consequent on either of those conditions.

The first thing that should present itself to his mind is to get rid of what Dr. Dewees terms the difficulty (the retained placenta), and the next thing is the best means of removing it at the least risk to his patient's life and future health.

The recognized practice of the Dublin School is to stimulate the uterus to contraction by friction, cold, ergot, stimulating enemata, and, if necessary, the plug. In the majority of cases one or more of these means succeed, and all our anxiety terminates.

Yet there is a considerable proportion which will not yield to any or all those methods, and the only course left open to us is to extract the secundines, or trust to nature to get rid of them by liquifaction.

I think we are never justified in leaving a patient to natural effort, after a reasonable time has elapsed, as the weight of opinion is in favour of the production of serious consequences if the patient be left unaided by art.

I would follow the practice of Dr. Dewees and Dr. Bond in extracting the placenta instrumentally, in cases which its removal could not be accomplished by the finger. The former gentleman recommends a small wire crotchet for that purpose, and from his own account of its success he would lead us to believe it was all sufficient.

However, there are two objections to its employment; first, being a sharp-pointed instrument, it is liable to tear the inside of the cervix or either lip of the uterus. The second is that it might tear through a soft mass of placenta, thereby increasing the hemorrhage, and rendering the extraction more difficult.

I consider the instrument introduced to the profession by Dr. Bond, of Philadelphia, and which he designates the *placental forceps*, the most suitable and easiest of application in this operation.

It is perfectly safe and so simple in its mechanism, that the most inexperienced can use it with facility and precision. I have seen it employed frequently in England, and many medical men who have adopted it for years informed me that it has been the means of saving lives.

For the benefit of those members of our Society who may not be acquainted with this instrument, I will quote a few extracts from the author's description of it. It is about ten inches long, curved laterally on a radius of about twelve inches, and the blades about one inch and half longer than the handles. The blades terminate in an oval expansion nearly half an inch wide. The handles and blades, including the edge of the oval expansion, are rounded or bevelled off very much like those of an œsophagus forceps, so as to prevent the probability of wounding or pinching any of the surrounding soft parts. The mode of using it is to place the patient in the usual obstetric position, with the hips well over the edge of the bed; next introduce the fore finger of the left hand well up to the os uteri, and on the anterior surface slide the instrument into the canal of the cervix; then seize the retained placenta, and gradually withdraw it, still keeping the instrument guided by the left index finger.—11*th May*, 1867.

Dr. John A. Byrne exhibited a fibrous polypus uteri, about the size of a small egg, which he had removed with the écraseur, and gave the following history of the case:—

Mary P., age forty, unmarried, by occupation a servant, consulted me in June, 1866, on account of long continued uterine hemorrhage. She was very blanched and anemic; her lips were pale; a well-marked anemic bruit in the aorta and carotid vessels, and also a venous murmur in the right subclavian region. She complained of great weakness and languor, and could scarcely walk, although she was a woman of strong formation, and much above the average height.

On inquiring into the history of the case she informed me that she had always enjoyed excellent health, and menstruated regularly until three years since, when she began to perceive that her monthly illness was prolonged, and that more discharge occurred than what was usual, and that by degrees from this it went on until the hemorrhage was constant.

She consulted some hospital physicians, and was treated by them for this hemorrhage, but without much permanent benefit. During this time she was frequently examined per vaginam, and her disease was pronounced incurable. She stated herself she was recommended to apply to the hospital for incurables, so that evidently the severe hemorrhage, without any apparent cause, may have led the gentlemen to suppose it was a malignant disease of the uterus, and this opinion was, perhaps, strengthened by feeling an enlargement of the uterus which existed previously to the descent of the polypus, which at that time was intra-uterine, for it is not very probable that one of the gentlemen whom she mentioned to me as having given to her this advice could have mistaken a polypus for cancer. I mention this circumstance to illustrate how cautious we must be in pronouncing a positive opinion in doubtful cases.

This occurred in the month of August or September, in the year 1865; she then went for a short time to the country, where she did not derive much benefit, and she came, as I have stated, in June, 1866, under my care.

Having proposed to examine her, she most willingly assented, and on introducing my finger I found a tumour occupying the upper part of the vagina, and movable in all directions, but attached by a pedicle to the anterior wall. It was the size of a small egg, and oval in shape.

I explained to her the nature of her disease, and asked her particularly had anything occurred since the time, when she was under observation, to induce her to think that there was any change in the symptoms, so as, if possible, to fix the occurrence of its escape from the uterus, but she could not fix upon any circumstance. Latterly, however, the hemorrhage had become most severe, and she complained of a sense of weight; and, as I have before stated, her appearance indicated great anemia, produced by severe and long continued hemorrhage.

I explained to her that by removal of this polypus a termination to her symptoms would in all probability ensue, and I need scarcely say that she most willingly assented to its removal. I made her remain in bed for some days, and take nourishment, wine, &c., previous to the operation, and on June 30, assisted by my friends, Drs. Hardy and Kidd, I proceeded to remove the polypus.

The instrument used was the wire écraseur. Having placed her on her left side, with her hips elevated, and opposite to a good light, the left fore and middle fingers were introduced into the vagina, and carried up to the os uteri and the polypus caught by the vulsellum. The écraseur armed, was now passed up and slipped over the tumour, and applied over the pedicle. This was found just within the os uteri, and on the anterior part. The noose, having now been slipped over the tumour, was drawn tightly over the pedicle, and the screw turned gradually, and in a very short time the pedicle was severed, and the tumour fell out. There was scarcely any hemorrhage, and the patient complained of very little pain. The polypus, although small, yet was not very accessible. This depended, however, more upon the want of capacity in the vagina and the narrowness of the vulva—the woman not being married—than upon any great difficulty in fixing it.

The patient went on very well, and had no bad symptoms; and, with the exception of a slight hemorrhage on the 17th day, she never complained, and recovered perfectly, and since that time she has been in the best of health; has menstruated regularly; has had no hemorrhage, and has improved in appearance.

Sometime since, however, I had an opportunity of seeing her, and from circumstances which happened, I have reason to suppose that her mind is not as sound as formerly; in fact, she has betrayed some signs of

aberration. Whether this may remotely depend upon the long continued loss of blood producing an effect upon the brain, or whether it is a mere coincidence, I do not take it upon myself to decide. I remember, however, a case in which puerperal insanity followed severe secondary hemorrhage, and it was a long time before the woman's mental integrity was restored.—*8th June*, 1867.

*A Case of Coccyodynia Cured by Operation.* By Geo. H. Kidd, M.D., F.R.C.S.I., Assistant Master to the Coombe Lying-in Hospital, &c.

Coccyodynia is the name proposed by Sir James Simpson for a painful affection of the coccyx, of not uncommon occurrence, but not recognized or described in books, till he gave an account of it in the *Medical Times and Gazette* for 2nd of July, 1859. Since then Erischen, in the fourth edition of his "Surgery," has given a short account of it, founded on Simpson's paper; and Dr. West has described it in the third edition of his work "On the Diseases of Women," under the more correct, but not so convenient term of coccygodynia, the name suggested by Scanzoni in a very elaborate paper published in the *Wurzburger Medicinische Zeitschrift*, and which has been followed by Dr. West in his observations. In this paper Scanzoni gives an account of twenty-four cases, but as many of them were accompanied by various affections of the uterus and neighbouring organs, and the pain ceased on the removal of the associated disease, they can scarcely be considered cases of the affection described by Simpson.

The leading symptom of the disease is, according to Simpson, pain in the region of the coccyx experienced by the patient whenever she sits down and rises, and sometimes while she remains in the sitting posture. Most of the patients affected with it are obliged to sit on one hip, or with only one side resting on the edge of a chair, or with the weight partially supported by a hand on the chair, and they are rendered sometimes very awkward and miserable in consequence; some of them actually dread sitting down, so great is the pain then felt, and not only so, but the pain is, in many cases, aggravated or renewed whenever it becomes necessary to resume the erect posture. There are other movements of the coccyx besides that are liable to be attended in such cases with pain. Thus, some patients have pain with every step they take in walking, while in others the movements of progression excite no uneasiness whatever. Others, again, feel the pain most when the bowels are being evacuated, or under any circumstance in which the sphincter or levator ani, or the ischio-coccygeal muscles are called into action.

The pain is not in every case very acute or intolerable, and varies as to its severity in the same patient at different periods. It is always increased by pressure on the coccyx, and more so when the pressure is

made from the point upwards; and it is always increased by moving the coccyx with the finger, but the kind of movement that most aggravates the pain differs in different cases.

The pathological cause of the pain, according to Simpson, is disease of the coccyx or of the coccygeal joints, or inflammation of the surrounding fibrous tissues, arising in general from some injury inflicted during labour, or in some other way. In one of his cases it was caused by a fall from a horse. Two of Scanzoni's patients referred it to frequent long rides on horse-back. South mentions the case of a gentleman who fractured his coccyx by sitting down suddenly on the corner of a snuff-box, and who was ever afterwards obliged to wear a pad on each tuber ischii to keep off pressure.

In many cases the disease cannot be traced to any definite cause. One of Simpson's patients attributed it to sitting for a long time on damp grass. It may occur in the male or female, in the married or single woman, but the most frequent cause is injury to the part during child-birth. Of Scanzoni's twenty-four cases, eleven of the patients attributed the disease to this cause. When the diseased condition is once established every movement of the muscles, or structures connected with the coccyx, causes pain, and prevents the part from regaining a healthy condition.

For the treatment of the disease Simpson recommends the subcutaneous division of all the muscles and fibres connected with the coccyx, so as to isolate it and allow it to remain at rest, which he has found to give almost immediate relief in most cases, but in some it has failed, or the relief has only been temporary, the pain returning after a time. In one of the cases detailed in his original paper this occurred, and he subsequently removed the coccyx entirely; and I find, by a notice in the *Edinburgh Medical Journal*, that this woman was exhibited at a meeting of the Edinburgh Obstetrical Society on the 28th March, 1861, and she then stated that, "since the operation had been performed" (two to three years probably) "she had found herself perfectly well, and was now able to do all her ordinary work as a laundress, for which she had been utterly incapacitated."

M. Gosselin has recorded a case that he had under his care in the Hôpital Beaujon, in which subcutaneous section of the muscles was tried, but, he says, failed. Hesitating to adopt the extreme measure of removal of the coccyx, he again had recourse to palliative treatment, and suggested the simple use of an india-rubber air-cushion. "After the patient had steadily continued this plan for twelve days, she had so far lost her pains as to be discharged from the hospital in a fair way of convalescence, since nature herself, the stress on the parts being taken off, would doubtless complete the cure, under the favourable auspices of *rest*." M. Gosselin says it was found necessary to regulate the bowels by a rhubarb aperient, to prevent hard motions passing over the tender part.

The Editor of the *Gazette des Hôpitaux* quotes, in connexion with this case, a similar one, cured, he says, in a similar way, which fell under his observation some years ago; but it will be observed that in M. Gosselin's case the cure was not by any means complete when she left the hospital, and in the case that has been recently under my care, a long-continued and careful trial was made, before the operation, of india-rubber cushions, and other devices for keeping off pressure, without any benefit whatever.

Scanzoni states that leeches to the coccyx, tepid baths, warm fomentations, and, if the pain have a neuralgic character, subcutaneous injections of morphia, have seldom disappointed him in effecting a cure. He never found it necessary to adopt the subcutaneous section. I have already mentioned that in many of his cases the pain appears to me to have been only sympathetic or reflected, and I find that of the twenty-four cases but ten were cured, nine were relieved only, the result in three cases was not known, and in two the evil remained unrelieved by any treatment.

Mr. Bryant has published a case in which he performed the subcutaneous section with perfect success, and Dr. Godfrey, of Sonora, has published a case in the *American Journal of Medical Science*, in which he had operated also with success. The disease had lasted ten years, and the patient stated "that she had consulted a dozen of the best physicians in Tennessee, under whose treatment she successively was for a good while, without deriving any benefit from it, and finally they pronounced her incurable."

I have not been able to find in our systematic treatises or journals, any references to the disease beyond those I have noticed thus briefly, and I believe the disease has not hitherto been described by any of our Irish writers, nor has Simpson's operation for it been performed in Dublin, so far as I can learn, except in the following case, in recording which I beg it will be understood I make no claim as to novelty of observation or peculiarity of treatment.

On the 23rd June, 1866, I attended a young lady in her first labour. She had a very long and an unyielding perineum, and when the head came to press on it, there was very considerable delay, though the uterus acted strongly, and I feared there would be laceration, which, however, did not take place. The case was one in which I might now be inclined to adopt the practice suggested by Dr. Beatty in the paper he read before the Obstetrical Society, on rigid perineum, at the beginning of this Session. Convalescence took place without impediment, but when the lady began to move about, she found she suffered great pain in the coccyx. This pain corresponded exactly to the description given by Sir J. Simpson. It was greatest in sitting down and rising up, and it continued all the time she sat. Walking sometimes pained her, but she had no pain when lying or in defecation.

On several occasions I made most careful examinations of the part and surrounding organs. There was no disease to be detected in the uterus,

or its appendages, nor did the rectum present anything abnormal. There was some thickening at the articulation of the coccyx with the sacrum, and pressure here caused great pain, more so than at any other part. I confined this lady to the sofa for sometime when she first complained, and gave iodide of potassium, and applied iodine over the part, but though this was continued as long as her general health would permit, she derived no benefit. I then allowed her to sit up and move about a little, making her use an air-cushion, but this gave no relief. She thought a firm cushion of a horse-shoe shape, and stuffed with hair, was better than the air-cushion, but neither this nor the local use of sedatives, nor tonics, and change of air, were of any real service. At length I determined to suggest the subcutaneous section of the muscles, being influenced to do so, in a great degree, by hearing from Dr. Beatty, in the course of a conversation on the subject, that all the patients he had met having this disease had died of phthisis, and I saw that my patient was daily losing strength and flesh from the constant pain she suffered. When I proposed it, she at once consented, and told me then, for the first time, that her mother, though she recovered ultimately, had suffered from the same disease for many years of her life, and was often obliged to kneel at table instead of sitting down.

On the 30th of March last, I proceeded to perform the operation, assisted by Mr. Maurice Collis. Having congealed the skin over the part with Richardson's apparatus, I introduced a narrow long-bladed tenotome at the point of the coccyx, and passed it on the flat, close to the right side of the bone, to above the part that I had found tender on pressure. I then turned the edge so as to cut from behind forwards, and, keeping close to the bone, divided all the tissues on that side. I now carried it round the apex, cutting all the fibres attached there, and, without taking out the knife, passed it up on the left side, and divided the tissues there in the same way as on the right. Only a few drops of blood escaped through the small aperture in the skin, and I applied a compress and bandage to limit the subcutaneous hemorrhage, which was, notwithstanding, considerable, and was followed by inflammatory hardness and swelling, so that she could not sit, but even before this was gone, she found, greatly to her delight, that all the old pain had disappeared, and she has remained perfectly free from it ever since, and has improved in strength and condition. I may mention, as showing her freedom from pain, that on the 16th of May, she drove for five hours on a common outside car through the County Wicklow, without any inconvenience.—*8th June*, 1867.

*P.S.*—Since this paper was read at the Obstetrical Society, I have received a copy of a most valuable work, by Warren, of Boston, entitled "Surgical Observations, with Cases." The author has devoted a section to injuries of the coccyx, and details six cases illustrative of the severe

and long-continued symptoms arising from injury to this bone. Mr. Warren believes these resemble most closely the acute pains which attend periosteal inflammation. "Scarcely an instance," he says, "can be said to have resulted in perfect recovery, and many of them have caused severe local symptoms for some months, and even years, afterwards." In the first case the injury was caused by a fall on the stairs, "the pain and inability to sit lasted more than a year, and the sensitiveness of it continued for ten years after the accident." In the second case, also caused by a fall on the stairs, there was some displacement of the bones, which was adjusted at the time; at the end of six or seven months the patient was able to walk a little about the room with support—"she did not recover from the immediate effects of the accident for one or two years, and now, at the end of eight years, is not able to ascend stairs without suffering." Another of the patients had the coccyx fractured and displaced some years before. "At the time, she was confined about five weeks with very severe symptoms, and never ceased to suffer in the part since." Remarking on these cases, Mr. Warren says Dr. Simpson has described the affection, "and in some obstinate cases, after having tried all remedies in vain, proposed, and practised with success, the girdling of the coccyx by subcutaneous section, just above the diseased part, so as to cut off all nervous communication with it." Mr. Warren does not seem to have performed any operation for the disease himself, and it will be seen from the foregoing he has not correctly apprehended Simpson's operation, or the objects proposed to be attained by it. I may further mention that the lady I operated on continues, now October, 1867, perfectly free from pain.

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## TRANSACTIONS OF THE COUNTY AND CITY OF CORK MEDICAL AND SURGICAL SOCIETY.[a]

SESSION 1867.

Dr. Johnston, President.

*Hemicephalic Infant—Protrusion of the Membranes of the Brain through a Fissure of the Occipital Bone—Supernumerary Fingers and Toes.* By John Popham, M.A., M.B., Dub. and Cantab.; Physician to the Cork North Infirmary.

I beg to exhibit to the Society a female infant, with several anomalies of structure. It has arrived at, or about, its full time. Both the body and members appear above the average size, which is partly due to a large

[a] These reports are supplied by Dr. Purcell, Secretary to the Society.

development of adipose substance. The face, in its lower two-thirds, presents nothing very remarkable; there is no hare-lip, or cleft of the palatine vault; the tongue, however, is uncommonly large, and the frænum linguæ dense and extending to the tip. In the upper third the orbital cavities are completely contracted, and the vault of the skull is depressed, so as to convey to the eye a peculiarly idiotic expression, which is heightened by a red, sacculated tumour three inches long, and over an inch wide, which hangs down from the back of the head in a grotesque fashion, having protruded between the two portions of the occipital bone, which have remained abnormally disunited.

Supernumerary digits exist upon the four extremities, but with some variation. The little finger of the right hand is trifid. At the level of its second joint a smaller one branches off, and a third sprouts from the latter; both the offshoots are small, but the nails are perfectly formed. The remaining fingers of the right hand are natural. On the left hand the little finger again is divided into two complete digits. Thus the excess of development in both hands lies in the same direction, namely, the *little* finger.

Upon each foot there are six toes, all in the same plane, and each toe beautifully regular and proportional.

The genital organs show no defect, the sphincter ani is wanting, the orifice being large and patulous.

I made a dissection of this monstrosity upon the day following its exhibition to the Society. There was nothing very anomalous in the thoracic or abdominal organs, except that the thymus gland was unusually large. The head was then carefully examined. I expected to find an absence of the parietal bones, but on removing the scalp, which was nearly half an inch thick, dense and loaded with fat, the parietal bones came into view, meeting at so obtuse an angle as to seem almost flat; both bones were small, and so completely ossified that the scalpel grated harshly on them. They were so closely knit together, and to the frontal, as to require force to disunite them. The frontal and temporal bones were also small, and the orbital cavities rudimental. The base of the skull had the usual cavities, but somewhat irregular.

The supposed encephalocele was a hernial protrusion of the membranes, and it contained in a pouch a quantity of bloody serum. No traces of brain could be found in it; in fact, it seemed a kind of diverticulum to the membranes, which probably were devised by nature for a brain of the average dimensions. The brain itself was quite undeveloped, each anterior lobe being about the size of a filbert, and the whole cerebral mass not larger than a small hen's egg, and so pulpy and diffluent that its components could not be distinguished. The spine was not examined.

There were some curious features in the parentage of this monstrosity.

The mother had been insane, and was reported to have been so at the period of cohabitation. The father was a man of violent passions, and fond of drink. According to the mother's account he was intoxicated, and used violence with her. He was married, but she was not. The nature of her insanity was religious melancholy. She was quite sane at the time of her labour. No malformation existed in either parent. The child was a first-born, and she felt it moving as far as the last week of gestation. The labour was tedious; the face presented, and the ear was felt by the midwife, Miss Tedford. The child was lifeless when born; the skin showed no syphilitic taint. The mother was not aware, and was not told, of any defects in the child.

*Remarks.*—In this case we may notice some points of interest—1st. The connexion of the malformation of the brain with the insanity of one parent and the drunkenness of the other; 2ndly. Its association with force. M. Geoffroy St. Hilaire, the elder, held that those monstrosities in whom the cranium remains open, and the brain deficient, are mostly produced by some mechanical violence upon the abdomen of the mother; 3rdly. A co-operating cause may be found in terror at the violence used. Rokitanski favours the opinion that strong emotion influences the growth of the embryo, so that here we had lunacy, inebriety, violence and fright as conjoined causes of cerebral imperfection; 4thly. The law of compensation of St. Hilaire (loi de balancement) is not quite sustained in this case as regards the supernumerary digits. By his rule an excess of parts in one direction balances a defect of parts in another. Hence we should suppose that when six toes existed on one foot, there ought to be but four on the other, or a superfluity of manual digits should conditionate a deficiency in the pedal, so as to keep up an equilibrium of formative effort, but none of those compensations took place. Perhaps the overgrowth in the extremities had its correlative undergrowth in the arrest of development in the cerebrum, but the relation seems anomalous between an abortive brain and a luxuriance of parts of a diverse structure. 5thly. The overplus of growth at the periphery and the want at the centre accords with that law in monsters that the *direction* of growth is centripetal. 6thly. The association of an imperfect brain with an undue condensation of scalp, an undue amount of fat in the body, and an undue ossification of the skull bones; diminution being still opposed to preponderance. Perhaps the resistance of the overlying parts checked the growth of brain, and forced the membranes through the fissure of the occipital bone—another anomaly, nature usually leaving the sutures loose, while the occipital portions are united early. Lastly. It is stated by writers that monstrosities rarely occur in first pregnancies. Such was not the case in the present instance. In some families the tendency to anomalies is considerable.—13*th February*, 1867.

Dr. N. J. Hobart read the two following cases of Traumatic Tetanus, recently treated by him in the North Infirmary:—

Case I.—Daniel Fitzpatrick, aged forty, a sailor, admitted to the North Infirmary on the afternoon of Wednesday, the 5th December, 1866. On Sunday evening, the 2nd instant, whilst on his passage from Liverpool, he experienced tightness in the chest and a sensation as if the bowels were contracted, together with pain in the back and pole, accompanied with profuse perspiration. Thinking he would get better, he continued to work till three o'clock on the following day, when to these symptoms, which were gradually increasing, was added a stiffness in his arms. On Tuesday the 4th, he was visited by Dr. Callaghan (who was requested to visit him as a case of cholera). Dr. C. purged him freely with calomel and colocynth and black draught, and directed mustard poultices. The symptoms having increased in severity on the following day he was removed to the North Infirmary.

On admission he denied having received any wound, but on examining him carefully, it was discovered that in a fall on board ship some ten or twelve days previously he had nearly torn off the nail of the middle finger of the left hand, and had a clean incised wound on its anterior aspect still unhealed, and which looked deep owing to the thickness of the cuticle. His symptoms on admission are thus described on his card by Mr. Chatterton, the clinical clerk:—There is great rigidity of the muscles, particularly those of the back, chest, and abdomen, as also those of the neck and arms; the jaws are not very firmly fixed; he can protrude the tongue to a slight extent; his voice is low and hoarse; he complains of difficulty in getting rid of a quantity of a viscid secretion from his throat and mouth, and has difficulty occasionally in coughing; the countenance is anxious, but the "risus sardonicus" not well marked. He winces sometimes from lancinating pains in the loins, and is suffering from smart tetanic spasms. The bowels have been freely acted on by the medicine; the urine normal in quality and quantity; pulse 92, full and regular.

Four p.m.—Ordered a hot bath immediately, to be gradually raised and kept at 120 for half an hour; and the following draught:—

℞. Tinct. opii. min., xl.
Chloroformi min., xx.
Pulv. glycyrrhizæ, gr. x.
Aquæ, ʒi.
Ft. haust. stat. sumd.

To be followed in two hours by one of half this strength, and repeated every two hours if the spasms are severe.

Ten p.m.—Expresses himself greatly relieved by the bath; has had nearly two hours' sleep, and no violent spasms since. Ordered to have

twenty minims of laudanum and ten minims of chloroform every hour or every two hours. Sherry and strong beef-tea to be supplied freely.

December 6th, ten a.m.—Was tolerably easy, and had occasional sleep up to one a.m., when the spasms became severe, and recurred at shorter intervals, more particularly about seven a.m.; the opisthotonos at times is extreme; greatly annoyed at the difficulty of getting rid of the tenacious secretion from mouth and pharynx.

The chloroform and laudanum draught of yesterday to be repeated, and a tobacco enema to be administered immediately, to be repeated every two or three hours according to symptoms. Chloroform inhalations, which had been occasionally employed during the night, to be administered during spasms, and as far as possible to anticipate them; to be freely plied with beef-tea and wine.

December 6th, four p.m.—Spasms have not been so frequent, and are invariably relieved by the chloroform; there is greater difficulty of swallowing, but the patient says he feels much better.

December 6th, ten p.m.—Continues much about the same state; does not suffer much; however, the difficulty of swallowing is now so great that he refuses to take drinks. Pulse has risen to 110. Ordered to have chloroform inhalations occasionally through the night, to have a tobacco enema at intervals of six hours, and injections of beef-tea and whiskey.

December 7th, ten a.m.—Was watched during the night by Dr. O'Sullivan and Mr. O'Kelly, who administered chloroform each time the tetanic spasm threatened; the inhalation had the effect of prolonging the interval between the spasms from every five minutes to about half an hour, and sometimes longer; however, for the last few hours the chloroform appears to have lost this effect, as the spasms are very frequent, though the patient suffers very little. He is greatly prostrated, the pulse 120, and feeble. Thoracic effusion has been going on for some hours, and he is evidently sinking.

Half-past eleven a.m.—Had telegraphed to Dublin for a supply of nicotine, which just arrived; though no benefit could now be expected from it, half a drop was endermically injected. Almost simultaneously the patient got a severe spasm, and died in a couple of minutes.

Owing to the objections raised by the friends, it was impossible to ascertain the condition of the spinal cord, &c., in this case.

Case II.—Ellen Deasey, aged fifty, had a molar tooth extracted on the 24th January. Two days afterwards complained of severe pain along spine from occiput to sacrum, and pains in her legs; felt as if she had got a heavy cold. She stated she had "a quantity of phlegm on her chest which she could not get rid of." On the 28th she was seen by Dr. Callaghan; her symptoms had then increased, but she more particularly

complained of pains in her neck and occasional spasms of her legs. As she resisted all Dr. Callaghan's urgent solicitations to go into hospital, her neck was freely leeched and aperient medicines prescribed. On the 30th she consented to go to hospital, and was accordingly admitted to the North Infirmary about three p.m., when, owing to my absence, she was seen by Dr. Shinkwin. On admission she complained of *some* pain in her neck and back, but she said it was nothing compared to the intense pains in her thighs and legs. Trismus was complete; the risus sardonicus well-marked; sterno mastoid muscles rigid; abdominal muscles hard; great tympanitis; bowels not relieved since the 26th; pulse thready—120; respiration quick; no action of intercostals. Ordered scammony and calomel in five-grain doses every four hours, and turpentine and assafetida enema. Fomentations to be applied frequently to the abdomen, thighs, legs, &c.

Ten p.m.—I saw her at this hour; she had had two of the scammony and calomel powders and the enema, without any effect on the bowels; has had some sleep; can now articulate distinctly, but in a shrill tone of voice. She can open her jaws sufficiently to protrude the tongue slightly; says she would be all right if she could get rid of the pains in her thighs. Before leaving the bedside I gave her three-quarters of a drop of nicotin in a little sherry and water, and directed three draughts, each containing a half drop, to be given at intervals from three to four hours, between this and ten on the following morning.

The assafetida and turpentine enema to be repeated in four hours if necessary.

To have strong beef-tea and sherry frequently through the night.

January 31st, 11 a.m.—Had a tolerably quiet night; some occasional spasms and partial opisthotonos, which did not give her much pain; took nicotin regularly, and also the broth and wine. The bowels have not yet been acted on; has got rid of some flatus; abdomen not so tympanitic. Astonishment is expressed by the students at the slight appearance of suffering.

To have immediately three-quarters of a drop of nicotin, to be repeated in three hours.

Six p.m.—Has been easy all day. The jaw is getting so locked that she has begged to be permitted to keep a piece of wood between her teeth, a request which was of course complied with. She has experienced considerable difficulty in swallowing for the past two hours; pulse about 120, but decidedly weaker. Given three-quarters of a drop of nicotin; to have beef-tea injections.

Nine p.m.—Difficulty of swallowing now so great that she refuses to take anything; pulse 130, still more feeble, at the same time expresses herself quite easy. To have beef-tea and wine injections, and the nicotin to be given in half-drop doses in injections every three or four hours, if the spasms become violent.

From this the patient gradually became weaker, until eight o'clock on the following morning, when she expired, retaining her consciousness to the last, and having had but some very trifling spasms through the night.

Considerable difficulty was experienced in making a *post-mortem* examination; however, I succeeded in exposing the cord for about four inches below the medulla oblongata. The membranes were highly vascular; the sheath of the cord was so red that it appeared to have been painted, and the quantity of fluid around it unusually large. On a section being made both the white and grey matter were congested, but more particularly the grey.

Although both these cases terminated fatally, I am satisfied the details will not be without interest to the Society. Were it the practice invariably to publish all cases independent of the result, we would more readily arrive at the relative value of special remedies.

Had these cases been admitted to hospital earlier a fairer opportunity would have been afforded for treatment; but I must confess I have little confidence in the remedies employed as *curatives;* in both, however, the usual sufferings were wonderfully mitigated, and the patients saved an incalculable amount of pain—in itself a great desideratum. As to treating the disease scientifically and successfully, we must wait until more is known of its pathology. The valuable researches of Dr. Lockhart Clarke and others would lead us to hope that much light will be thrown on this subject ere long.

I regret extremely it had completely escaped my memory that Dr. Lockhart Clarke was anxious to receive spinal cords of tetanic patients, until reminded by my friend Dr. Johnston (our esteemed Vice-President). The specimen I had was then too much mutilated. Should any cases occur here again, I trust we will not neglect the opportunity of having the specimens examined by so experienced an observer.—13*th February*, 1867.

*Tumour with Genital Organs Attached.* Exhibited by H. M. Jones, M.D., M. Ch.; L.R.C.S.E., &c., &c.; Demonstrator of Anatomy, Queen's College, Cork; Physician Cork City Dispensary.

Sir, I show you this pathological specimen, and a drawing of a complete prolapse of vagina, involving uterus and bladder, which came under my notice in the dissecting room at the Queen's College, Cork.

It occurred in an old subject, and was interesting as having the mucous membrane of the vagina converted into wrinkled integument, tough, and having the appearance of long exposure. I made at the time I saw it a careful examination, and perceived, at its most dependent portion, a very minute aperture, scarcely the size of a pin's head, and into which I passed a small probe. Feeling the tumour externally, I

discerned a small hard central body not much larger than a good sized quill. The appearance of the tumour was such as you see represented in this photograph, from a drawing by Mr. Hazle, of the Queen's

College, Cork. I made an attempt to pass a bent probe into the bladder, rupturing the urethra before I finally succeeded. By a small incision made afterwards higher up, I found that the bladder had descended in front of the uterus and was adherent to it. The latter viscus being extremely small, its cavity was almost obliterated. In the bladder was a quantity of thick yellow turbid urine. I dissected off the mons veneris and labia, preserving the appearance of the tumour as it presented itself, also keeping the Fallopian tubes and ovaries in connexion for exhibition, the left ovary having a cystic growth of small size at its side. It appeared to me to be a specimen worth recording, as exemplifying such complete prolapse of vagina, bladder, and uterus in one tumour. The entire conversion of the mucous membrane of the first of these organs into integument, tough, and forming a protection to the parts contained within, when, added to the fact of the uterus and os being of such a small size, as also the adherence of the bladder to the uterus, this anatomical arrangement, rendering it almost an impossibility to pass a catheter unless perpendicularly downwards, make it interesting. I think it a curious fact that a woman could have survived to such an age with such an abnormal condition of her urinary and genital organs.—13*th February*, 1867.

*A Case of Removal of a Portion of Gum-elastic Catheter from the Bladder.* By F. A. Purcell, M.D., M.R.C.S.; Physician to the Cork Fever Hospital, and Secretary to the Cork Medical Society.

On the evening of March 2nd I received a telegram from a gentleman

from Charleville, stating—"Will be in Cork at eight o'clock; want to see you very badly." He duly arrived. Being in no pain at the time he told me his story as follows:—That at four o'clock p.m. this afternoon he passed into his bladder a No. 4 gum-elastic probe-pointed catheter, one of Maw's black variety, without the stilette; he suffered at the time owing to over-exercise, partial retention of urine, caused by spasmodic action supervening on two organic strictures existing in the urethra; for these strictures he had been attending me, but as he was obliged to leave town I taught him to pass instruments, generally G. E. bougies, and being nervous of the retention coming on, the last day he happened to be in Cork he bought a probe-pointed gum-elastic No. 4 catheter, one of Maw's French black variety. This one he passed for the first time on the present occasion.

In passing the catheter into the bladder he suffered no more pain than usual. Water flowed out and bladder was emptied. On withdrawing the catheter he experienced great pain whilst it was passing through the stricture; this he did with great care and tenderness, and when it was wholly withdrawn he observed the round bulb portion gone, having parted at the eye. He concluded at once, from the care with which he had withdrawn the catheter, the bulb had remained within.

At five o'clock p.m., an hour after the occurrence, he micturated in a good flow without a check, anxiously looking in the pot for the missing bulb. At 5.45 p.m. he again felt inclination to micturate, when only a few drops had passed. He felt something move on from the bladder to the stricture, which checked the flow. He then introduced a No. 4 G. E. bougie straight into the bladder without difficulty, in order to push back the foreign body and allow the water to flow. Withdrawing the instrument, he again tried but failed to get water off. He now determined to start for Cork by train, having consulted two doctors in Charleville, who recommended him to start. Whilst on the car going to the station he felt most uncomfortable about the stricture; the sensation as of an instrument being in the stricture; this continued until he reached Mallow station at 7 p.m., when the train stopped. Feeling the bladder full and uncomfortable, he made, "for curiosity sake," an effort to pass water, and felt something as if slip out very gently and smoothly to the orifice; at the same time water began to trickle down his leg. The thought struck him that the obstacle had passed out, so he restrained the passing of the water, and got out of the carriage and went to the water-closet of the station. Here not a drop came. Seating himself again in the carriage he felt somewhat more easy, both as regards the sensation in the stricture and as to the fulness of the bladder. He arrived at Blarney at 7.30, made another effort to pass water in the carriage; a little trickled down his leg, but stopped of itself. On going through the tunnel a strong desire to make water seized him, and he

yielded. The water began to flow in its usual easy manner, but when he saw the carriage floor streaming, feeling somewhat ashamed, he checked the flow. On the train's arrival he felt so much relieved that he walked from the station to my house, where he arrived at eight o'clock p.m.

Having relieved his mind by giving me the history of his case, a quarter of an hour after arriving (8.15 p.m.) he desired to make water, and passed into a vessel about a pint, with a fair full stream; but towards the end the flow stopped with a sudden check, and the customary drops did not trickle from the urethra. I made him rest quiet, and did nothing. From the sudden check to the flow I concluded the obstacle was still in the bladder. At 10 p.m. he was unable to void a drop, and feeling unpleasantly full he "begged" of me to interfere. I accordingly introduced a No. 5 G. E. probe-pointed bougie, not inserting it further than just to pass the stricture which exists six inches from the orifice, thinking that if I dilated the stricture the outward pressure of water might force the bulb before it. No water came. I then passed into the bladder a No. 3 G. E. catheter, with its stilette, and emptied the contents. Feels no great uneasiness of any sort since the occurrence at Mallow, and is comfortable. I sent him to bed, and gave him thirty minims of tincture of opium.

March 3rd, Sun. morn.—Slept but little, but this he attributes to the noise of carts passing the house. He got up at 6.30 to micturate, and was unable to void a drop, and then introduced into his bladder a No. 4 G. E. bougie; no water followed, and he returned to bed. I drew off his water with a No. 4 G. E. catheter at 8.30 a.m., much to his relief. He felt sick all the morning; took a cup of tea and a morsel of bread, which the stomach rejected. This I attribute to the opium given at bed-time. Pulse 64.

2 o'clock p.m.—Voided about half a pint, but with a narrowed stream; no check whatever or spasm.

7 o'clock p.m.—Passed a small quantity of water, and states that he experiences a feeling as if something was projected from the bladder as far as the stricture, which stops the flow.

10.30 p.m.—Dr. White kindly remained with him, as I had to leave town. In Dr. White's presence I determine to explore the urethra. I introduce my finger into the anus, and for as far back as I can go I can discover nothing, nor from that forward. I introduce simply through the stricture, in order to dilate a No. 4 silver catheter. He feels, after all this, an urgent desire to empty the bladder, and tries without success; and implores of me to draw off his water, which I do with a No. 3 G. E. catheter. I now advise bed, and give him calomel gr. 5, with a grain of powdered opium.

March 4, 8 a.m.—Slept tolerably well; pulse 70; tongue clean; no

uneasy pain; unable to make water. I draw off about six ounces of heavy and deep-coloured urine with No. 5 G. E. catheter. I give him a large dose of the Eff's citrate of magnesia.

Dr. Gregg came to see him with me to my study. We determine to gradually dilate the stricture by means of gum-elastic catheters, allowing them to remain in twenty-four hours at a time. I commence by introducing a No. 5, which we secure by tying in; and give him the following mixture:—

Liquoris potassæ, dr. 2.
Tinct. hyoscyami, dr. 4.
Sp. œtheris chlorici, dr. 1.
Decoct. pareira brava ad oz. 8. M.

An ounce every third hour.

March 5, 8 a.m.—Slept fairly; pulse 70. The No. 5 catheter held in till about five o'clock this morning, about which time it passed out. Voids water with ease, with the instrument out. I again introduce the same catheter.

2 p.m.—I withdraw No. 5 and pass in No. 6.

March 6, 8 a.m.—Slept well. The catheter remained in till morning, but slipped out when he was asleep. I introduce the same, which passes in with ease.

2 p.m.—Took out No. 6, intending to introduce the next number, but first desire him to pump, to try if the pressure of water may force out the obstacle before it. To our great delight and satisfaction, following a few drops of water, without any perceptible sensation, the foreign body passes into the vessel, the bulb portion foremost, perfectly clean as when introduced, having been in 89 hours.

It is, as I said above, the bulb from the eye out, that is, including half of the eye of a No. 4 Maw's French black gum-elastic probe-pointed catheter, being three-quarters of an inch long. I beg to present it to you for your inspection, as also a duplicate of the same lot and number. What strikes me most about this catheter is that the eye is placed at the very thinnest and most slender portion of the catheter, a most objectionable class of instrument, and of a most brittle description.

This class of case is of no common occurrence, complicated as it was with two existing organic strictures, one at six inches, the second about an inch from the first. In *Guy's Hospital Reports* of 1844, page 176, a case is reported in which Mr. Cooper extracted a piece of a bougie coated with phosphates by the operation as for lithotomy. The patient died ten days after, probably from the diseased state of his kidneys.

In *Guy's Hospital Reports* for 1840 a case is reported by Mr. Norris. Death resulted, where the man had been in the habit for many months of relieving himself by introducing a piece of straw to draw off the water. One day, however, he unfortunately either let the straw slip into the

urethra, or had broken it off in the canal. This happened about a month before Mr. Norris saw him. In the *post-mortem*, immediately behind the prostate, calculous concretions, all joined together by the straw, were found.

Sir Henry Thompson, Surgeon to University College Hospital, in his work on *Practical Lithotomy and Lithotrity*, at page 256, gives—

Case 10.—A mass of sealing wax in the bladder for six months which he removed (covered with phosphatic deposits) by the operation for median lithotomy. The patient having suffered for some little time with slight symptoms of stricture, he made a bougie of sealing wax and passed it into the urethra. On withdrawing it he discovered that a portion, about three inches long, had broken off and remained within. Sir H. Thompson says :—" My first impression was that this, being sealing-wax, might be easily crushed. I took the precaution, however, first to try the effect of a lithotrite upon a mass of sealing-wax placed in a basin of hot water at a temperature of 100° Fahrenheit, and discovered that it was no longer friable ; the lithotrite, instead of breaking it, merely kneaded it, and became dangerously clogged. I then decided to cut him by the median method."—*March 27th*, 1867.

*Snake Bite.*—The Secretary read the following communication from Dr. Francis D. Bullen, Visiting Surgeon to the Warwick Hospital, Queensland :—

October 9, 1866.—I was called on to go to a man bitten by a snake in New South Wales. Losing no time, I mounted my horse, taking with me some strong ammonia, powdered ipecacuanha, and some surgical instruments. On arriving at Accasia Creek I there found a powerful young man named George Campbell, aged twenty-six, five or six men holding him down, when tetanic-like spasms seized him, and then walking him about, and beating him to prevent him falling asleep. His pulse was feeble and slow ; appearance ghastly pale ; body clammy. When allowed to remain quiet for a few minutes he became comatose. I administered strong doses of ammonia, and rubbed the wound with ipecacuanha ; all present said it was of no use, that I had come too late to save him. After the second dose of the ammonia he vomited, and in ten minutes rallied, and told me that as he was putting down a slip rail a large brown snake suddenly attacked and bit him in the shin. He at once tied his belt tightly around his leg below the knee (and above the bite), and jumping on a bare-backed horse, rode to the nearest habitation, where they scarified the wound, gave him some brandy, and sent for medical aid at once, twenty-three miles distant. The Blacks sucked the flesh about the wound, drawing the blood in a wonderful manner, without breaking the skin (better than any cupping glass I ever saw). The inclination for sleep continuing I administered more ammonia,

loosened the belt and rope that had been round the leg, and bandaged it. Ordered him not to be allowed to go to sleep for some hours, and to go on with the ammonia. Next morning I found him lively, but weak. Ordered the wound to be poulticed, and had him removed to the Warwick Hospital, where he remained under my care for three weeks with obscure symptoms of periostitis of the tibia. The wound not yielding to treatment, the weather being very warm, gradually his health was giving way, and tetanic-like spasms in the leg attacked him every evening about sundown. Morphia and quinine had no effect on him, so I ordered him to leave the hospital for change of air. Blistering seemed to relieve him most. After leaving the hospital he seemed to get stronger, but the spasms becoming intolerable I called a consultation, and on December 15th, with Dr. Margett's assistance, put him under chloroform, and made an incision of four inches along the anterior portion of the tibia, intending to trephine the bone where the fang injured it, but on closer examination I found the bone extensively diseased, and removed a large sequestrum $3\frac{3}{4}$ inches long, showing markedly the spot where the fang struck it. The wound has now healed rapidly, his health is quite restored, eats and sleeps well, no pain or uneasiness. The man had been bitten about five and a-half hours before I saw him. I only took two hours and twenty minutes to reach him. The symptoms were:—Great nervous excitement, lancinating pain, beginning almost immediately after the bite; then great prostration, and tendency to coma.

Ammonia and ipecacuanha seem to be antidotes; stimulants are recommended; brandy and ammonia combined are good, but the latter is the best. It is my intention to study the various effects more closely in the next case that I meet. There are not many recoveries after the bite of the brown snake during the coupling season, when they are most dangerous and venomous; death generally occurs in from half an hour to six hours, and always when sleep or rather coma occurs.—*April 10, 1867.*

*On Amputation through the Knee-joint.* By F. M. Luther, M.D., M.R.C.S. Eng.

On the 15th January, 1866, I attended T. C., aged fifty-six, of Belleville, a labourer, who had been injured some hours before while felling a tree. I found he had sustained a bad compound fracture of the tibia, with extensive lacerated wounds of the leg; the bone was sticking out of the wound, and was broken in more places than one. The skin was also stripped off great part of the limb. I told the man, and his friends, that amputation should be resorted to, but they would not hear of it; I therefore took my leave. On the 26th I was sent for again, and told

that he had been taken to a bone-setter in Dungarvan, who removed a piece of bone and applied poultices, but who sent the man home again, after a week's treatment, to have his wounds healed. Canovan was now most anxious to have amputation performed. I found him tolerably well able to bear it, though there was some degree of fever and diarrhea. I agreed to perform the operation next day, and arranged to have the assistance of Dr. Currey, of Lismore. That gentleman met me on the 27th, and having inspected the leg we determined to amputate through the knee-joint, as the wounds extended to within an inch or two of the articulation, and the calf was swollen from inflammation. Dr. Currey was more inclined for amputating above the knee, but yielded to my wish to perform it through the joint. Having had the man secured on a table, and put under the influence of chloroform, I proceeded to make a long anterior skin flap, from which, as it was reflected back, I dissected off the patella. Laying open the joint, I divided the ligaments, and cut a short thick flap from without inwards of the calf. The tourniquet commanded the artery perfectly, as the man was very thin and his muscles relaxed. It had been applied over Hunter's canal. Dr. Currey tied the popliteal, and the loss of blood by the operation was very trifling. I should say that I first sawed through the condyles and removed an angular portion at either side. Having waited till oozing had ceased we connected the flaps by suture and wrapped wet lint over the stump, merely retained by a single turn of the roller. As a precautionary measure against hemorrhage the tourniquet was left on loosely, with instructions that it should be tightened, if necessary, until I could see the patient. The man was given a little laudanum in half a glass of wine. Next day, on removing the lint, which had been kept constantly wet, I found a good deal of swelling and a grey border of slough on the skin flap, nearly half an inch deep. The skin flap was made very long to allow for retraction. I took off the tourniquet, which had got to be rather tight from the swelling, cut the sutures to relieve tension, and applied lint dipped in a tepid solution of Condy's disinfectant.

29th.—Constitutional symptoms good, but sloughing gradually extending; poultice of carrots and oatmeal; broth.

30th.—Grey line of slough still advancing.

31st.—Wine; opium; beef-tea; poultice as before.

The slough separated about the 5th February. There was then but little appearance of granulation upon the bone, a considerable portion of which was left exposed. However, it gradually became pink, and the granulations blended with those of the skin. It seemed very unpromising for some months, but eventually cicatrized fairly. During the autumn he fell one day and stripped the stump again.

I have not yet permitted him to use an artificial leg, which he is most

anxious to do, but I mean to allow him to essay it shortly. Probably what is called a bucket leg will be the kind best suited to his case. Considering the great mortality which attended this operation as performed by the French in the Crimea, and lately in the American civil war (the success of the latter being, however, infinitely greater than that of the former), and the rough treatment Canovan experienced in being brought to Dungarvan and treated by a bone-setter, I suppose I ought to be satisfied with the result of my operation, but I was greatly disappointed that the skin flap should slough. However, on reflection, I think this will be very likely to occur in elderly people, and that therefore the operation is unsuited for them, or if it be performed the flap intended to cover the bone should be cut from the calf. I regret having left on the tourniquet, but it was quite loose and could not, I thought, compress the stump injuriously. I think the operation a very good one where the subject is young.

The angle at which I sawed the condyles I think also contributed to strangulate the vessels of the skin-flap. The man enjoys very good health, but suffers from ennui, and is anxious to be at work. As the cicatrix is firm and hard, except in one spot, which is not bigger than the top of a writing-pen, I trust he can soon use an artificial leg.—*April* 10*th*, 1867.

*A Case of Aneurism and Rupture of the Ascending Aorta, with Pathological Specimen.* By Surgeon-Major Dr. Johnston, Medical Officer, Cork District Military Prison.

The subject of this case was a soldier thirty-six years of age, and of moderately temperate habits. He had served in the army for thirteen years, and performed a good deal of hard work during the Crimean War.

About four years ago he suffered from an attack of primary syphilis, for which mercury in moderate quantity was administered; this was succeeded by repeated attacks of secondary and tertiary symptoms, and at the time of his death he had nodes on the tibia and frontal bone.

For some months prior to his death he was in indifferent health, although not under treatment in hospital. He was pale and anemic, frequently complained of giddiness and frontal headache, and was subject to dyspeptic attacks.

On the 17th of March, 1866, he was in the act of wheeling a barrowful of coals, when he suddenly fell down dead in the barrack square.

*Autopsy.*—On raising the sternum and costal cartilages the pericardium was found distended, with about 10 oz. of semi-coagulated blood. The heart was of normal size, and its surface covered with a thick layer of fat. This was deposited in greatest quantity at its base, decreased in

amount towards its apex, and formed nearly one-half the thickness of the ventricular walls.

No valvular disease was present.

A fusiform dilatation of about an inch in extent had taken place in the ascending aorta, and this part of the artery was irregularly thickened by patches of atheromatous deposit. The internal coat of this portion of the artery was somewhat softened, and separated from the middle coat by this abnormal deposit, which was of a yellowish-white colour, soft, and easily broken down by slight pressure.

On slitting up the aorta a small rounded opening was found a short distance above the anterior semilunar valve. This opening was the commencement of a canal which led downwards for about half an inch between the atheromatous patches and the middle coat of the artery, and opened by a minute aperture into the pericardium, and caused death by sudden extravasation of blood.

There was no degeneration of the coats of the cerebral arteries, and all the important viscera of the body were free from disease.

This case possesses considerable pathological and practical interest, as it bears on the connexion supposed by several of the older writers, including Severinus, Lancisi, Mogagni, and others, to exist between syphilis and atheromatous deposition between the coats of arteries—a connexion more recently brought before the profession by Professor Aitken and Staff Surgeon-Major Dr. Davidson—the former in his valuable work on the "Science and Practice of Medicine," and the latter in the Army Medical Reports for 1863.

Dr. Aitken states that he examined 26 bodies affected with syphilitic disease, and found 17 labouring under structural changes in the thoracic aorta, which he believes were dependent on syphilitic contamination of the blood. These cases are given in detail by Dr. Davidson in the admirable paper alluded to, and clearly demonstrate the relations between these diseases as cause and effect. My own experience corroborates this opinion, as several cases have recently come under my immediate observation, where comparatively young soldiers, the subjects of syphilis, died suddenly from aneurism, depending on that atheromatous degeneration of the arterial system, which in so many instances predisposes to, and causes the formation of, aneurismal tumours.

In the *post-mortem* room it is unusual to find atheroma of the arterial system under forty or fifty years of age, unless in cases previously affected with syphilis; and it is still more unusual to find comparatively young persons in civil life die suddenly from rupture of the aorta where no history of syphilitic contamination of the blood exists.

I entertain no doubt that the syphilitic poison exerts such a deterioration of the blood in the system as not only to predispose to, but to cause the deposition of, that peculiar secretion between the internal and middle

coats of the artery which constitutes atheroma, which, according to Hasse, is never transformed into cartilage, nor is deposited *on* the internal coats of arteries. The case published by Dr. Lewer of the R.A., in the Army Medical Reports for 1862, is another instance of the intimate connexion existing between these morbid conditions. If the opinion that aortic degeneration is frequently a consequence of syphilitic deterioration of the blood be found to be correct, an important practical suggestion is given to us, which we should not neglect when we examine patients labouring under any form of syphilitic disease. In such cases we should invariably examine minutely the condition of the aorta, from its origin to its termination, and ascertain its immunity from disease or the contrary, as our prognosis and treatment of the disease for which we are consulted will depend on the presence or absence of arterial disease.

To all practitioners, but especially to army surgeons, the co-existence of these diseases is of practical importance, as the early detection of an aneurismal tumour of the aorta, by careful stethoscopic examination, which may be effected in many instances long antecedent to its pressure becoming a source of discomfort, will enable the surgeon to place his patient in the most favourable circumstances for the prolongation of life, if not for the cure of the disease.

Another point of interest is observed in this case. It may be seen that the heart is covered with a layer of fat placed between its serous covering and muscular structure. This deposition is confined to the external surface of the heart, forming the first stage of fatty degeneration of this organ, but does not appear to have become interposed between, or to have caused absorption of its muscular fibres.

Neither hypertrophy nor valvular disease occurred in this case, although, owing to the elasticity and contractility of the aorta being impaired by the morbid deposition between its internal and middle coats, greater force was required by the left ventricle to propel the blood throughout the system. Usually, as is well known, when any, even slight, impediment to the blood-current through the aorta takes place, the left side of the heart becomes more or less hypertrophied, and it acquires greater propelling force.

Now, as it is evident that hypertrophy has not occurred in this heart, can this exception to the general law be satisfactorily accounted for by the supposition that the super-imposed layer of fat on the heart surface caused such an amount of deterioration of the muscular fibres as to render them incapable of increased development?

We must, I think, adopt this view, or suppose that the non-contractile and inelastic aorta presented no abnormal impediment to the arterial current.

That the former explanation is the more probable may be inferred from the fact that this patient, for some months prior to his death, was subject

to attacks of giddiness, evidencing a languid circulation, and that the brain at times was insufficiently supplied with arterial blood.—25*th April.*

*Abnormal Growth of Bone.* By Dr. Lamprey, 67th Regiment.

Of the numerous cases of diseased bone of every variety of form, noticed among the Chinese who attended the hospital at Tien Tsin, established by the British army of occupation for the treatment of poor Chinese, the case represented in the photograph was the most singular.

It was a case of elongation of the tibia and fibula of the left leg. The subject of it was a lad about seventeen years of age. For the last two years previously he had observed this leg to be growing longer than the other; and at the time the photograph was taken there was a difference of fully six inches between the length of the two legs, so that he walked with the greatest awkwardness. The leg was somewhat attenuated, and in the front part of the middle of it there was a large open ulcer resembling an ordinary varicose one. The account the lad gave of it was that he could not attribute it to any injury—that it, in short, came on of itself, and he was afraid that it would continue to grow longer, as its progress of late was not less rapid than before; that the ulcer appeared shortly after the leg began to grow.

The width of the tibia did not appear to be altered, though the fibula felt so thin that the idea of its being drawn out suggested itself. No indications of dead bone or sinus could be detected by the probe, though it was rough and irregular on its surface beneath the ulcer, and hollowed out when the surface was ulcerated. The discharge was very considerable.

He could walk and stand without causing pain in the limb, and the lad's appearance did not indicate much unhealthiness.

A short time subsequent to this case another lad, about fifteen years of age, was brought to me with a small ulcer just below the anterior prominence of the upper part of the tibia. It had originated in a small abscess, and continued to discharge for some months. There was a prominence of the granulations indicative of diseased bone, and on introducing a probe in the centre of this it grated against a rough surface.

The father of the lad was very anxious about him, and expressed his fears that he might become like the preceding case, which he had seen. Finding nothing would make any improvement, it was proposed to remove a portion of the bone under the ulcer with a trephine. This was readily assented to, and it was done accordingly. The bone, to a depth of one-eighth of an inch from the surface was removed. It was found that some enlargement of the lacunæ gave a cancellated appearance to what should have been more compact structure, but no sequestrum was found. The lad was apparently in excellent health, and after the operation the wound soon took on a healthy appearance. I was unable to learn the final result of this case, in consequence of the removal of the military forces from Tien Tsin to Shanghai.—25*th April.*

*Case of Bright's Disease, with Hypertrophy of Heart, in combination with Atheroma of the Aorta, and Semilunar Valve Disease, in a Syphilitic Subject, with Pathological Specimens.* By Surgeon-Major Dr. JOHNSTON, Medical Officer Cork District Military Prison.

A SOLDIER, forty years of age, and twenty years' service, was admitted into the Cork Garrison Hospital on the night of the 24th of April, 1866, having been discharged a few weeks previously from his regimental hospital, where he had been under treatment for chronic bronchitis.

He suffered from rheumatic and syphilitic attacks four years ago, and some weeks prior to his last admission had been invalided for Bright's disease, and the debility consequent on long-continued syphilitic disease.

For many years this patient was very intemperate in his habits, but had given up drinking to excess for the last eighteen months.

On admission he was extremely feeble; he spoke incoherently, and gave a very confused report of his illness; he passed his stools involuntarily; the surface of his body was cold, his respiration hurried, and loud, harsh, bronchial râles were audible over the entire chest. The heart's action was rapid and strong; an indistinct "bruit" accompanied both sounds, and the pulse at the wrist was rapid and easily compressed. His cough was frequent, and accompanied by expectoration

of white frothy mucus; his urine was scanty, of low specific gravity, and loaded with albumen.

Beef-tea and brandy were given in small and frequently-repeated quantities; heat was applied to his extremities, and a large sinapism to his chest.

Under this treatment he improved in a few hours; but about noon the following day he was suddenly seized with a convulsive fit, which passed off after a few minutes' duration.

A blister was applied to his chest, and a stimulating expectorant mixture of carb. ammonia, vin ipecac, tinct. scillæ, and decoct. senagæ given frequently.

No material change occurred in his condition until eleven o'clock a.m., on the 29th, when he became speechless, but continued partially conscious for two hours, and died suddenly in a convulsive fit, six days after his admission into hospital.

*Autopsy eighteen hours after Death.*—Muscular system attenuated; cicatrices of buboes in both groins, and of ulcers on the glans penis. Frænum destroyed by ulceration. The anterior surface of lower third of right tibia was rough and enlarged, and there was no œdema of lower extremities.

The brain was healthy in every respect; not the slightest trace of inflammatory action apparent in the membranes. About 4 oz. of transparent serum were found in the sac of the arachnoid; none in the ventricles.

Both lungs were healthy anteriorly; posteriorly they were congested, of dark colour, somewhat carnified in appearance and consistence, but were still crepitant. Both were intimately adherent to the parietes of the chest posteriorly and laterally, the connecting bands being broad and strong—the result of an old pleuritic attack, probably combined with pneumonia, from which the lungs had not completely recovered.

The mucous membrane lining the trachea and the bronchial tubes was thickened, and of a dark red colour, and the smaller branches of the latter were filled with a frothy muco-serous secretion of a reddish colour. No tubercular deposition was found in any part of the lungs.

The heart was greatly hypertrophied; the wall of the left ventricle was an inch in thickness, its carneæ columnæ very much enlarged, and the cavity of the ventricle somewhat diminished in size, with a small portion of the arch of the aorta attached; it weighed 25 oz. The aortic opening was slightly contracted and rough, and the ascending portion of the arch was considerably dilated. The valves of the aorta were thickened, closed imperfectly, and allowed regurgitation into the left ventricle. The right auricle and ventricle were dilated, but the tricuspid and sigmoid valves were quite healthy.

There were numerous patches of atheromatous deposit between the

internal and middle coats of the aorta throughout its entire extent, and were continued for a short distance into the common iliac.

The liver was slightly enlarged, but healthy in structure. The spleen was of normal size, but extremely soft and friable, and weighed 6 oz. The kidneys were slightly contracted in size—the left more so than the right—and were well marked specimens of granular degeneration of these organs; the right weighed $4\frac{1}{4}$ oz., and the left 3 oz. The capsules were thickened and easily torn off the cortical structure. This had a mottled appearance, and was rough to the touch, in consequence of the copious albumino-fibroid deposition on its surface. On making a section of each kidney from its convex edge to its hilus, this deposit was found to be of firm consistence, of a whitish-yellow colour, and penetrated in considerable quantity between the tubular cones, compressing and nearly obliterating them altogether at some points.

On the anterior surface of the right kidney there was a small cyst, which, when opened, contained a thin whitish fluid in a smooth dense membrane embedded in, and closely adherent to, the substance of the kidney. A similar, but much larger cyst, was situated close to the upper part of the hilus, and was left unopened for the inspection of members.

None of the large serous sacs contained fluid, nor was there any effusion into the cellular tissue of the extremities.

The history of this case, taken in connexion with the pathological changes apparent in the morbid specimens before the Society, affords another instance of the relation which frequently exists between syphilitic contamination of the blood and the atheromatous deposition between the coats of the aorta, which so often, at least in military life, predisposes to the formation of aortic aneurism. This subject I ventured to bring under the consideration of the Society at our last meeting, in consequence of its assumed practical bearing on the treatment of syphilitic and aneurismal disease.

A marked discrepancy was found to exist between the force of the cardiac action and the character of the pulse at the wrist, the former being comparatively strong, the latter feeble and easily compressed. This condition was owing, probably, to the combined influence of narrowing of the aortic orifice, imperfect semilunar valves, and the rigid inelastic condition of the aorta dependent on the extensive deposition of atheroma between its coats throughout its entire extent, and exemplifies the necessity of examining the volume, strength, and rapidity of the blood-current in the radial artery by digital pressure, as well as the force and frequency of the heart's action by the stethoscope, before we can accurately ascertain the character of the circulation, and through it the vital powers of the patient.

When we take into consideration the existence of long-continued disease of the kidneys in this case, and that the secreting portion has

been almost obliterated by the albuminoid product, we can readily account for the greatly diminished quantity of urine secreted; the impaired mental condition of the patient on admission; the occurrence of the convulsive fit the day following; and the supervention of partial coma, as these phenomena constitute the most frequent precursors of death from uremic poisoning in fatal cases of the chronic form of Bright's disease.—*May* 9, 1866.

*Case of Fever.* By Dr. W. Jackson Cummins, &c., &c.

Few subjects are more difficult than the study of fever, as its ever-varying character and type render all attempts at generalization more or less imperfect, and make each case met at the bedside a study in itself.

The question of the identity or diversity of typhus and typhoid has been much debated, and is not yet quite settled, while a new question has arisen as to whether, when the symptoms of both diseases are present during the course of fever, they arise from the same cause, or from the co-existence of two poisons in the system; whether, also, when the symptoms of typhoid occur during convalescence from typhus, or *vice versa*, the last attack should be looked upon as a relapse, or as the development of a distinct disease, the poison of which had lain dormant during the first attack.

An interesting specimen was exhibited at the Pathological Society of Dublin last session by Dr. H. Kennedy, taken from a patient who presented, he says, "three distinct stages of fever. During the first eleven days the symptoms were those of typhus; in the second stage, lasting seven days, enteric fever was present, with the characteristic spots; while the third, lasting nineteen days, was marked by a copious rash, and all the symptoms of typhus." The morbid pathology was that of enteric fever.

Dr. Duncan also read a case before the Medical Society of the College of Physicians, in which, with an ambiguous rash, and complete absence of ileo-cecal tenderness and diarrhea, in a case which was only a week recovered from typhus, two patches were found after death, in which Peyer's glands had sloughed away, leaving the muscular coat underneath smooth and bare.

The following case, although unmarked by eruption, has some bearing upon these questions, and therefore I shall read detailed notes of it, in order to provoke the discussion of an important question, and elicit the opinion of the Society.

Miss ——, aged twenty-five, had been feeling poorly for some weeks, but passed through her catamenial period naturally about a fortnight before the 21st of December, when she became feverish, and had to take

to her bed on the 23rd, suffering from cough, dyspnea, and bilious vomiting, with some headache. These symptoms lasted until the 28th, when I was sent for, but not being at hand, Dr. Callaghan was called in and prescribed for her.

On the following day I saw her, with Drs. Callaghan and O'Connor. She was then suffering much from dyspnea and dry cough, with physical signs similar to those of asthma; skin cool; pulse 80; tongue covered with a thick brown moist fur; thirst; constant bilious vomiting; no abdominal nor hepatic tenderness, fulness, nor pain; bowels confined for two days; urine scanty, and high coloured, with red deposit; some headache; insomnia for several nights; much nervous excitement of a hysterical character, and a firm conviction on her mind that she is going to die. Two pills, containing blue pill, colocynth, and henbane were prescribed, and a mucilaginous and diluent diet.

31st (11th day). — Spent a good night; bowels have been well opened; vomiting has almost ceased; pulse 80; skin cool, but tongue is still much furred, and the asthmatic symptoms, though relieved, still continue.

She was ordered a sinapism to chest, and three grains of blue pill, with half a grain of extract of stramonium, at bed-time; milk and soda water diet.

January 1st (12th day).—Spent a good day and night, but appears flushed; pulse 100; skin rather hot; tongue much less furred. The chief complaint is of a peculiar sort of sour taste in the mouth which is very distressing; bowels natural.

2nd (13th day).—Vomiting has returned, and pulse has risen to 112. There is a bright flush on each cheek, and the conjunctivæ are whiter and brighter than natural. The temperature of the body is high. The sour taste in mouth is still her chief complaint. The tongue is now covered with a thin white moist coat. There is no abdominal tenderness nor diarrhea. Headache much complained of. She did not sleep, and was delirious during the night. About noon the bowels suddenly acted violently, the discharge being principally fluid blood of a horribly fetid odour. Again and again a similar discharge occurred, each one being more purely sanguineous than the last, until she had lost some pints of blood.

When we saw her in the afternoon she was blanched and extremely feeble, but there was no decided tenderness over any part of abdomen; no tympanitis; no gurgling, at least as far as could be ascertained from the very cautious examination which dread of increasing hemorrhage permitted us to make.

Gallic acid, with sulphuric acid, were prescribed, and an enema of acetate of lead; five grains each of hyd. c. creta and Dover's powder at bed-time; bladders of ice to the ileo-cecal region; iced drinks and lumps

of ice to be swallowed. During the night, as the stomach was very irritable and rejected the acids, she was given three doses, containing ten drops each of turpentine, which were retained. Notwithstanding all these means the hemorrhage continued during the night, and the following morning (14th day) we found her very anemic and feeble. Pulse weak, small, and regular—120. She lay in one position, unable to move or speak; breathing still asthmatic; tongue white and moist; more than a pint of urine was drawn off by catheter; two grains of acetate of lead and a quarter grain of opium were prescribed every third hour; eggs and port wine *ad libitum*.

Afternoon.—Hemorrhage has ceased, and she bears nourishment well; urine drawn off.

January 3rd (15th day).—Spent a good night, and appears better and stronger; no hemorrhage nor diarrhea since; tongue moist and cleaner; has passed urine; she has taken five raw eggs and half a bottle of port wine since yesterday morning, and borne them well. Omit all medicine and eggs; reduce the quantity of wine; milk and rice water diet.

Afternoon.—Reaction has set in; pulse 120, jerking; skin hot; delirium; urine drawn off.

January 4th (16th day).—No return of hemorrhage; reaction continues violent; was delirious during the night; slept little; complains of headache; dyspnea has increased; pulse 120; no vomiting; tongue cleaner and moist. Omit wine.

January 5th (17th day).—Pulse 120, jerking; skin hot. There have been no maculæ of any kind. A dark-coloured formed fetal discharge has been passed. To have small doses of nitro-muriatic acid, and five grains each of hyd. c. creta, and extract of hyosciamus at bed-time.

January 6th (18th day).—Delirium has been of a more violent character; tongue whitish and very dry; one cheek more flushed; breathing rapid and asthmatic; passes urine involuntarily; much tremor of hands, and some muttering; can be roused to consciousness, and then readily protrudes tongue, which trembles much. Pulse has a sharp jerking character; 120. To take ʒvi. of wine every four hours, and a wine-glassful of beef-tea between each dose. To take half an ounce of castor oil and have turpentine applied to chest. Omit the acid.

Evening.—So much debility was present that wine had to be increased to ʒii. every fourth hour.

7th (19th day).—Very delirious; no sleep; skin hot and dry; tongue dry, brown, and furred; breathing rapid, and accompanied all through chest with sibilant râles. Pulse 124; much tremor of hands and tongue, with great debility; urine and feces passed involuntarily, the latter of a lighter colour than before.

Evening.—Tongue brown, dry, tremulous, and retracted; skin hot and dry; pulse 136; some subsultus. To have three grains of hyd. c. creta and five grains of nitre at bed-time.

8th (20th day).—Spent a sleepless, delirious night; much sordes on teeth and lips; subsultus has increased, and debility is excessive. To have ʒi. of wine every hour, and ʒii. of beef-tea every second hour; blister to occiput and nape.

Evening.—Had two convulsions during the day, and debility was so extreme that she required two or three doses of brandy. Pulse varies from 126 to 136. Half a pint of turbid ammoniacal urine was drawn off, and feet and loins fomented with mustard. To have wine as before, brandy when necessary, and strap blisters all over the head.

9th (21st day).—All the bad symptoms continued to increase until morning, when a copious warm perspiration appeared, and she fell into a semi-comatose state; the subsultus entirely subsided, and her friends thought that she had entered upon a favourable crisis, and very properly reduced the quantity of stimulants. At our visit we found her semi-comatose, tongue still thickly furred with quantities of sordes, but now moist; skin hot and perspiring: extremities warm; pulse 148, hard and jerking; respiration 52; blisters have risen well on head and neck. A few ounces of urine were drawn off, and wine continued in reduced quantity, but coma gradually deepened; pulse rose to 160; respiration became more rapid, and she gradually sunk, retaining the heat of body and extremities to the end.

There were three groups of phenomena in this case, the first of which may be called nervous, marked by bilious vomiting and spasmodic asthma (both probably caused by the action of fever poison on the pneumo-gastric nerve), nervous excitement, cool skin, and quiet pulse. Her general appearance during this time was not that of typhus, as the dusky heavy countenance of that disease was quite absent, while the clear eye and bright hectic flush of the cheeks betokened rather the advent of the abdominal lesion which occupied the mid period of the fever. The third group of symptoms were unmistakably those of typhus ushering in the crisis of that disease on the 21st day.

It seems to have been a mixed, or, as Dr. Hudson denominates it, a "hybrid" case of fever; for, although so many of the symptoms of typhoid were absent, it certainly presented some of the characteristics of that disease; and it may be stated that two cases of enteric fever occurred about the same time in the locality. The absence of eruption of any kind makes the case very obscure, but we know that both typhus and typhoid may exist without maculæ of any kind.

The doctrine of Hunter, that no two morbid poisons can exist at the same time within the system, influences the minds of many, even to the present day; but the observations of Dr. Murchison and others have proved this opinion to be incorrect, for it has been shown that measles, typhoid, and typhus, may co-exist; and I have myself noted a case where a patient hardly convalescent from scarlatina was vaccinated too late to

prevent contagion from small-pox, the vaccine vescicle and variolous eruption appearing simultaneously, affording a probability that the scarlatina, the vaccini, and the variolous poisons had been in his system at the same time.

Dr. Aitkin, who in the first edition of his classical work, expressed himself in favour of the identity of typhus and typhoid fever, brings forward, in his second edition, the mass of evidence to the contrary, which had meantime made him a convert to the now more generally received opinion that they differ both in their etiology and symptomatology. Dr. H. Kennedy, on the other hand, who was "one of the first to recognize the difference between the typhoid of Paris and our typhus," has, within the last six or seven years, written three papers to prove that "the two fevers known as typhus and typhoid are the result of a single poison; while the distinguished President of the Medical Society of the King and Queen's College of Physicians (Dr. Stokes), when commenting on the last of these papers, expresses himself in the following manner:—"Without denying that a well-marked case of typhus differs from an equally well-marked example of typhoid, I confess that I have long inclined to opinions similar to those of Dr. Kennedy, as opposed to the views of some of the London and American observers, the difference and conditions of receptivity may account for one man getting typhus and another typhoid from the same poison; and it is often seen in our hospitals that when a whole family are together in the wards, every variety of fever may be seen among them. It is more than *probable that the one exciting cause* affected all.

"Dr. Kennedy has shown what all must admit, that enteric symptoms may exist with a petechial rash; and though I am not here to advocate or condemn his views, it will be admitted that they deserve the most grave consideration."

Dr. Hudson, in an appendix to his valuable work on the *Study of Fever*, which has lately appeared, brings his vast experience and close reasoning to bear on the arguments of Dr. Kennedy, answering each one in detail. Nevertheless, I cannot help thinking that if two poisons are always in existence in mixed cases of typhoid and typhus, they are poisons which can pull together more harmoniously, and exist together less exceptionally, than scarlatina, measles, or variola can with typhoid, typhus, or with each other.

*A Contribution to the Pathological Anatomy of the Ear.* By M. V. Odenius Translated from *Medicinskt Archiv*, Band III., No. 4. Stockholm, 1866, by William Daniel Moore, M.D., Dub. et Cantab.; M.R.I.A.; Honorary Fellow of the Swedish Society of Physicians, of the Norwegian Medical Society, and of the Royal Medical Society of Copenhagen; Secretary for Sweden, Denmark, and Norway, to the Epidemiological Society of London.

I. *On a Way, hitherto little attended to, by which Morbid Processes may be Transmitted from the Middle ear to the Cavity of the Cranium.*—The immediate cause of the following observations was a case interesting in both a forensic and a pathological point of view, which occurred in March, 1863, in the pathological dissecting room at Lund. The cause of death was proved to be abscesses of the brain, depending on internal otitis of the left side, with caries, one of which abscesses, near the base of the cerebellum, as is so often the case, proceeded from the corroded tegmen tympani. For shortness sake I shall, however, pass over both this and the other morbid changes met with, dwelling only upon that which is directly connected with the subject before us, namely, a smaller abscess in the left hemisphere of the cerebellum. From this abscess a narrow passage leads through the cerebral substance forward towards the posterior surface of the petrous bone as far as the non-perforated dura mater. The place where the passage reaches the dura mater corresponds to the "vascular foramen situated without and somewhat above the opening of the internal meatus auditorius" (note of the dissection), in the orifice of which lies a small purulent mass; immediately around this, moreover, the dura mater is separated from the bone, and somewhat thickened; at some distance upwards it is also infiltrated with pus.

The "vascular foramen" in question is described in most anatomical works, and is usually designated simply as the opening of a diploic canal, or as destined for the transmission of a small vein (Krause, Weber, Froriep, Wilson, &c.) Some authors, however, at the same time pay some attention to the mode of its formation. Thus Henle (*Knochenlehre*, pp. 142 and 151) describes it as follow:—At the side of the porus audit. int., and nearer to the upper margin of the petrous portion is found a blind depression, resembling a cicatrix drawn in and with the entrance turned to the apex of the pyramid, an incompletely filled hole under the superior perpendicular semicircular canal. In the new-born child there is found under the superior anterior semicircular canal a deep hole, filled only with cartilage, with an opening having a middle direction, which hole, even in the adult, is not completely obliterated. R. Wagner, too (Sömmering, p. 55), designates the hole or chink in question as a track left by dura

mater, which in the child passes into a blind hole beneath the superior semicircular canal—Conf. also Huschke (Sömmering), p. 900.

An examination of a human fetus of from 20 to 25 centimètres (from nearly 8″ to nearly 10″) in length—the youngest I had at my disposal for this purpose—shows, that at that time both the external and the posterior semicircular canals still consist partially of cartilage, while the superior is already ossified throughout its whole extent. This last-named semicircular canal is on its medial side still free,—not as in the adult imbedded in an investing bony mass—and beneath it passes a hole or depression, which consequently turns its opening, in a medial direction, deeply into the cartilaginous mass situated within and above the outer semicircular canal. The depression is filled with a vascular process from the dura mater, and from it even very considerable vessels extend into the cartilage. During the progressive ossification this depression just mentioned gradually fills up; though this takes place, not uniformly from all sides, but principally from the bottom and from the anterior circumference, so that the depression, even in the new-born child, is in general rather shallow, and is situated more posteriorly under the posterior half of the superior semicircular canal. As age advances, the filling bony mass gradually increases, and appears also on the inner side around the superior semicircular canal, so that soon, in children of one and a half or two years, the medial circumference of the semicircular canal just mentioned is completely covered with bone. Of the former depression there now remains only a chink varying in width, which afterwards becomes gradually narrower, until it has assumed its permanent form of a narrow canal, leading out from the interior of the bone, and opening with a somewhat wider orifice upon its surface.

The mode of development now described explains, on the one hand, the irregular, cicatrix-like form of the outer opening of the canal, as well as why this opening, although varying considerably in its position, is found in most cases on the posterior surface of the pars petrosa, and on the other, the position, the slight variation in width, and the other circumstances of the canal itself. This canal goes in fact as nearly as possible laterally towards the centre of the superior semicircular canal, or, most frequently, somewhat behind it, and there enters into open connexion with the wider or narrower osseous cells which pervade the bony mass filling the space between the external and superior semicircular canals, and which on its side communicate freely with the antrum and mastoid cells. If, as is very often the case, the filling up mass surrounding the semicircular canals is everywhere spongy, the canal in question may immediately on the inner side of the superior semicircular canal open into bone cells, whereby it enters in a still shorter way and almost directly into connexion with the upper part of the proper cavity of the tympanum.

If we reflect further that this canal, which protects a vein, is not un-

frequently so wide as to admit an ordinary bristle, we might even *a priori* feel justified in concluding, that in many cases of processes combined with the formation of pus in the middle ear, it might form a comparatively easy route for their further transmission. Besides the above case, one described by Lebert, if I do not interpret it incorrectly, affords proof of the justice of this conclusion. His words are: (Ueber Entz. der Hirnsinus, Virchow's *Archiv*, Bd. 9, p. 414):—"On the posterior surface of the right petrous bone, externally to the meatus auditorius internus, the dura mater can be very easily separated from the rather uneven bone, and in this place is found a small jagged opening, communicating with the cavity of the tympanum, which through partial destruction of the labyrinth is destroyed, and filled with thick, purulent detritus."

Some time after I had communicated the above case (in October, 1864) to the Physiographical Society in Lund, I found another described by R. Voltolini ("Sections Yrgebnisse bei Schwerhörigen und Taubstummen" (etc. Cas. 2. Virchow's *Archiv*, Bd. 31, 1864), which presents great similarity to it in reference to the point specially under consideration. In his remarks upon the case, to which I would refer the reader, Voltolini directs particular attention to this "way, which has hitherto been completely overlooked," and also gives a detailed description of the formation I have spoken of, agreeing in every essential point with that above given.

II. *Abscess in the Cerebellum in Connexion with Affection of the Ear.*—C. R., a saddler, aged forty, admitted into the hospital of Lund on the 3rd November, 1864, died there on the 13th December. His body was submitted to *post mortem* examination on the 16th of the latter month.

The note-book states that in the month of July in the same year the patient was said to have got "a violent blow on the forehead, but that he had not observed any inconvenience from it." Many years ago, without any assignable cause, he had heard badly with the left ear. Otherwise his health was good, until about three weeks before his admission into hospital, when he "got repeated shiverings, pain in the head, particularly over the forehead, and in the right ear, with singing in the latter." His appetite disappeared, he had a bad taste in his mouth, nausea but no vomiting, a feeling of oppression and tenderness in the epigastrium; the bowels were torpid. "When he sat up in bed a mist came over his eyes. In consequence of the pain and singing in the ears just mentioned, he is hard of hearing also in the right ear, but no change in it, nor discharge from it, is perceptible."

During his stay in the hospital the most prominent symptoms were:—Constant pain in the right ear and in the forehead; which pain, however, towards the close of November, changed to the back of the neck, "where as well as behind and beneath the ear, great tenderness is found even on superficial pressure, though greater on deeper pressure," causing the patient for a long time to keep his head motionless; sometime later the

pain was felt more within the head. The appetite was slight; in December vomiting after food set in. Constant obstruction. The pulse at first was from 60 to 80, subsequently its frequency was rather increased. The temperature ranged from 37·5° to 39° (99·5° to 102·2° F.) Increasing loss of power. Pupils of equal size, not dilated. No paralysis in the muscles of the limbs, face or eyes. Intelligence not disturbed, but possibly giving way a couple of days before death.

The report of the dissection contains with respect to the parts in question :—*Head.*—Dura mater in a state of considerable tension, and its blood-vessels rather congested. The fine membranes of the brain tolerably dry both to the touch and in appearance, but without exudation. The ventricles, particularly the right, distended and filled with a perfectly colourless and clear fluid. In the antero-inferior part of the right lobe of the cerebellum was found a well-defined abscess, as large as a pigeon's egg, filled with greenish-yellow, thick pus; the parts immediately surrounding this were rather softened, and on one side were broken up into a blackish, loose matter. The other parts of this lobe, as well as the left lobe, were in appearance tolerably healthy, though the white substance was perhaps somewhat yellowish, and the mass was in general somewhat loose. In the part of the petrous bone, on which the abscess mentioned rested, the bone was, through a circuit of some lines, carious and changed into a dark, pulpy mass, over which the dura mater was dark and rather loose, which was the case also with the parts of the soft membranes found over the abscess. Both in the petrous portion and in the mastoid portion were found sinuosities filled with pus, and communicating with the external meatus auditorius.

It was not until a week after the *post mortem* examination that I had an opportunity of investigating the state of the right organ of hearing, which had in the interval lain out in tolerably severe frost. In the removal the bone had been in some measure injured, the saw having posteriorly taken away the edge of the semisulcus petrosus inferior and the processus interjugularis, and further outwards, where the section went about through the synchondrosis petro-basilaris, also the posterior part of the sulcus sinus transversalis. Moreover the cartilaginous portions of the Eustachian tube and of the meatus audit. ext. were wanting. On the posterior surface of the pars petrosa was found a corroded irregular depression, surrounded by uneven edges, somewhat undermined at the upper and inner circumference. The greatest length of this depression is 16 mm. (·62992″) and lies almost horizontally, the greatest vertical extent (so far as it can here be determined) is 10 mm. (·39370″), and the greatest depth, in the upper part of the depression nearly 4 mm. (·15748″). The upper margin of the depression is at a distance of 7 or 8 mm. from the upper edge of the pars petrosa; externally it reaches to within 1 or 2 mm. of the sulcus sinus transv., internally

it is about 7 mm. (·27559″) from the outer margin of the porus acoust. int.; inferiorly, the boundary cannot be accurately defined. It therefore occupies the seat of the outer orifice of the aqueductus vestibuli with its surrounding parts. The depression is filled with greenish-yellow pus, after the removal of which the fundus is seen partly covered with bright-red granulations, and is rendered uneven by low projecting angles of bone; in the interior are found also white firm filaments of connective tissue strongly attached to the bone, from their position apparently remnants of the process of the dura mater penetrating the aqueduct. Around the depression, especially at the upper and inner part of its circumference, and in and on the porus acoust int., the posterior surface of the pars petrosa is of a bright red, with a coarsely radiating injection. The nerves situated in the porus acoust. int. are of a pale rosy red colour. In the part of the sinus transversus remaining on the preparation no change is perceptible.

After the bone had been cut through in a plane coinciding as nearly as possible with the posterior semicircular canal, and the vestibule with the superior semicircular canal had been opened, it appeared that no communication existed between the depression above described and the labyrinth, but that the compact bony mass in and around the labyrinth was of a similar rose red colour, the deepest colouring being in the neighbourhood of the depression, and slighter colouring anteriorly, so that towards the cavity of the tympanum the bone had nearly its natural colour. The contents of the bony labyrinth were so far altered, that the fluid found in it, although clear, was in the posterior semicircular canal reddish, in the vestibule and superior semicircular canal yellowish. The external semicircular canal and the cochlea could not be examined without too great injury to the preparation. Instead of the delicate filaments, which normally attach membranous to bony canals, there were found in the whole of the posterior, in the common, and in the nearest portion of the superior semicircular canal, as well as in the greater part of the vestibule, abundant collections of connective tissue. The membranous formations are here also thicker in the walls than usual, a condition which can be demonstrated also in the external membrane of the canal which was taken out. The membranous labyrinth otherwise presents in form and connexion no change perceptible to the naked eye.

In the outer part of the fundus of the depression the spongy bony substance between the inner circumference of the sulcus sinus transv. and the labyrinth is opened, and the cells situated there are filled with pus. Through the entire proper mastoid process, on the contrary, the cells, as well as also the antrum mastoideum, are perfectly free from pus, but the mucous membrane in the cells bordering on the affected part is considerably swollen and thick, which swelling diminishes towards the periphery of the bones, so that the great cells in the very apex of the mastoid

process seem little or not at all affected. Although from the depression we can in many places with a needle penetrate to the proper mastoid cells, the pus has not succeeded in extending to these, which evidently depends upon the fact, that the swollen investment in these, in themselves rather narrow cells, cuts off the connexion with the above.

The cavity of the tympanum is likewise perfectly free from pus, but its mucous membrane is thick and softened. The bones of the ear are unchanged in connexion and mobility, and no adhesions are found between the parts. The membrana tympani also seems somewhat softened, and exhibits a great oblong hole extending from the point of the handle of the malleus to the annulus fibrosus. Judging from the form of this hole and the appearances, we may, however, with all probability assume that it did not take place until after death, and it is probable that during the time the preparation lay exposed to the cold of Winter, the frozen membrane could not resist the increased atmospheric pressure from without. The external meatus exhibits nothing abnormal.

My sole object has been to give as accurate a description as, under present circumstances, was possible, of this interesting, and, with reference to the connexion between cerebral abscesses and affections of the ear, instructive case. I will, therefore, add only, that the investigation now reported appears undoubtedly to show, that the morbid process did not originate in the organ of hearing, but that the latter was only secondarily affected. The primary disease must consequently be sought behind it, in an affection either of the periosteum over the region of the aqueductus vestibuli, or of the cerebellum, with consecutive formation of abscess. Which assumption ought to be adopted, it cannot, however, in this instance, be easy to decide. But, under any circumstance, the case before us exhibits anatomically an ulcerative process in the pars petrosa, struggling outward from the cerebral cavity towards the middle ear, and which had already advanced so far, that no long time was probably needed for the pus to make a way for itself to the antrum mastoideum and the cavity of the tympanum, after which the membrana tympani formed the only obstacle, and one easily overcome, to its discharge through the external meatus. Nor, on the other hand, does the altered and "tolerably loose" part of the dura mater and other membranes of the brain, which constituted the partition between the cerebral abscess and the caries going on in the pars petrosa, seem to have required long to be broken through, whereby a connexion between the cerebral abscess and the external meatus would have been opened, but the occurrence of which, if it actually was brought about, would probably have been more difficult to explain, than the intermediate stage we here lighted upon.

III. *Extreme Attenuation with Formation of Holes in the Inferior Wall of the Tympanum—Constriction of the Fenestra Cochleæ.*—The changes here re-

ferred to were observed accidentally in a petrous bone, which with a part of another was preserved as material for preparations of the ear, and consequently without any knowledge of the symptoms with which they were attended during life. Although I am ready to admit that such descriptions of pathological preparations must possess a merely subordinate value in comparison with cases, which have been observed also during life, it seems to be going too far to deny, as has been done in some quarters with respect to the pathological anatomy of the ear, that they have any importance whatever. It is under this conviction that I hope that the following brief description will not be entirely devoid of interest or value.

As is well known, the inferior wall or fundus of the cavity of the tympanum is normally very narrow, is longitudinally more or less excavated, and lies with its deepest part somewhat lower than the sulcus tympani. It most frequently appears uneven from low angles of bone, which form small irregular cells. On section it is found to be, in different individuals, of very varying thickness, and not unusually very thin and transparent. Sections show further, that the deepest part of the fundus of the cavity of the tympanum, or the region below the promontory, corresponds to the arch of the fossa bulbi venæ jugularis, so that the intervening bony wall forms at once the floor of the one and the roof of the other cavity, a circumstance to the practical importance of which, with reference both to embolic formation in the jugular vein, and to hemorrhage from the same, Toynbee first, and after him, Tröltsch, directed attention.

In the preparation I am now speaking of, belonging to the left ear, the bony wall in question is not merely as thin as paper, and on its upper or tympanal surface perfectly smooth, but is at the same time pushed up into the cavity of the tympanum by the fossa bulbi jugul., which appears unusually deep, so that the bottom of the cavity, instead of being excavated, forms a longitudinal rounded elevation. This elevation is so considerable that it covers the inferior part of the promontory and the greater part of the fenestra cochleæ, and slopes outwardly towards the sulcus tympani. Corresponding to its situation so high up in the tympanum, this lower wall has, of course, an unusual breadth, reaching, at the broadest part, to more than 4 mm. (·15748″). The change is, however, not confined to a general attenuation and elevation of the bony lamina already mentioned, but in two places amounts to actual perforation of the same. Of the holes so formed, which are closed only by membranous parts, the one is 3·3 mm. (·129921″) in length and 0·8 mm. (·031396″) in breadth, and lies near, or rather in, the very sulcus tympani, so that the membrana tympani seems to have been in part attached to it. The other hole is tolerably round, 1·5 mm. (·059055″) in diameter but with cut edges, and is situated in the highest part of the elevation, immediately external to the fenestra cochleæ and below the outer extremity of the fenestra vestibuli;

the two holes are therefore situated, each on its side of the elevation, in the vicinity of its junction with the lateral walls of the cavity of the tympanum. In consequence of the elevation, too, as has already been stated, the fenestra cochleæ has been for the most part closed from without, so that only in its upper part does it leave a passage for an ordinary bristle. No changes can be discovered in the bony labyrinth.

As no perceptible change was met with in the investing mucous membrane, there was no reason to assume that the person should have experienced any actual injury from the attenuation in question, but the preparation exhibits only an anatomical arrangement of the parts, which, in case of the occurrence of an inflammatory or carious process in the cavity of the tympanum, might easily, in consequence of the slightness of the obstacle to the passage into the jugular vein, have led to the most dangerous results. On the other hand, there can be no doubt that the constriction of the fenestra cochleæ, which, as the mucous membrane was found remaining, amounted to an actual obliteration, so that it could not be discovered from without, must have had an essential influence upon the person's hearing.

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## Important Letter to the President, Vice-Presidents, Governors, and Guardians of the Lying-in Hospital. By Evory Kennedy, M.D.

May it please your Excellency, my Lords and Gentlemen,

The great Institution confided to our guardianship, which has, for upwards of a century constituted an ornament, and, as the first of the kind, a source of justifiable pride to our city, requires to be remodelled. The time has arrived in which, like all human institutions, progress and changing circumstances have produced such an influence upon it, that neither the intentions of the founder, the wants and just rights of the public, nor the claims of humanity, by securing the greatest preservation of life, are accomplished by its instrumentality. These considerations have so long pressed upon me—considerations, strengthened by my occupations and habits of thought, and so confirmed by a connexion of nearly forty years with this Institution in the various capacities of pupil, assistant, master, and governor, that I venture to hope no excuse is required for my present intrusion.

The preamble of the charter sets forth its objects as fourfold. First, that of preserving the lives and relieving the miseries of

numberless lying-in women and their infants. Second, that of preventing child desertion and infanticide. Third, the prevention of gentlemen from going abroad for instruction in midwifery. And lastly, that by "admitting and instructing, in such hospital, women who, after some time spent there, being duly qualified, may settle in such parts of our said kingdom, as most stand in need of such persons, it will be a means of preventing the unhappy effects owing to the ignorance of the generality of country midwives."

That these objects *have* been accomplished it cannot be denied; but that they *are* accomplished to the extent and degree commensurate with the present resources and capabilities of the foundation, no man can for a moment affirm.

This proposition will appear evident, when it is stated that the patients admitted in the year 1818 amounted to 3,801; those delivered to 3,539; whilst these admitted in 1866 only numbered 1,324: those delivered only 1,069. In the year 1837, when the Institution was under my care, the admissions having fallen under 2,000, the Governors, on my application, allowed me to establish a dispensary for treating externs, and to open a ward for the diseases of females. Since that time upwards of 4,000 females, labouring under diseases peculiar to their sex, little understood and less attended to in other hospitals, have been admitted and treated within the walls of your hospital—treated, I say, by competent physicians who have made this class of disease their especial study.

And yet this is nothing to what might have been accomplished had the admissions been increased in the wards for the diseases of females as the admission of labour cases diminished. Let us now inquire why have the admission of labour cases diminished to nearly a fourth the number of those in 1818? At its foundation, the Dublin Lying-in Hospital was a unique institution, and for 80 years no other asylum or means of caring for lying-in women in their hour of need existed in this city. Subsequently, the Coombe Hospital and other maternities were opened, affording facilities for attendance upon the poorer classes in their own homes. Again, the North and South Union Poor-houses afforded asylums for the more destitute. These combined causes lessened the number of applicants for admission until at length they have fallen from nearly four to little over one thousand annually. No doubt, the prevalent idea of recoveries being better at their own homes than in hospital, since public attention has been called to the comparative statistics in each case, has had its influence in lessening the number of applicants to

hospital. Be this as it may, the Governors of the hospital are not responsible for the diminution in the numbers, as they have received all that applied. They have thus, as far as in them lay, carried out the intention of the founder in relieving the miseries of all the lying-in women that have applied for admission. But how have we acquitted ourselves of our trust in the other requirement of this part of the preamble, that of "preserving the lives" of the patients confided to our charge? My conscience obliges me to admit a conclusion, which has been long pressing upon my mind, that in this respect we have failed. Failed from no want of care, of talent, or assiduity, on the part of our medical officers—failed from no niggard supply of food, medicine, or appliances—failed from no neglect on the part of our efficient staff of nurses and superintendents. But, simply, because the original plan and construction of the hospital was faulty, and because our great founder, Mosse, did not possess the power of divination or foreseeing what experience of the working of such an institution for many years could alone reveal, namely, that the congregating a number of lying-in women under the same roof engenders and spreads amongst them a disease, "*sui generis*," and of the most fatal character.

Puerperal fever, although occasionally met with, and even epidemic in the homes of both rich and poor, is known to haunt our lying-in hospitals as its peculiar "*habitat*," and so great are its ravages in lying-in hospitals, and such the proportion of victims swept away by it, in proportion to other fatalities in parturition, that there are physicians and philanthropists who even question whether lying-in hospitals, as generally constructed, do not prove rather a curse than a blessing to the lying-in patient. Upwards of twenty years since my attention was called to this subject by having been consulted by some benevolent people in America as to the best principle on which to construct a lying-in hospital. And I then unhesitatingly advised that it should be constructed in detached buildings, capable of containing only two or three beds in each building, and one story high, or, if two stories high, that separate entrances by outside stairs should exist to each room.

It is this plan that I now beg to suggest to you for adoption at the lying-in institution under your care; and peculiar facilities exist by possessing a high plateau, particularly well suited to this purpose in that portion of the Rotundo gardens next to Palace-row. This plateau is about 400 feet by 200. On this I would recommend that 30 cottages, 25 feet by 15, with avenues 20 feet

wide intervening, be built; that these be fitted with 3 beds in each, according to the accompanying plan. Fortunately, through the forethought of your former master, Dr. Collins, to whose exertions the finances of the hospital owe so much, the ground of the square has become the property of the hospital, so that the required buildings can be constructed on your own ground. The money for this purpose, as I explained to your Board on a former occasion, can be obtained at 3 per cent., paying itself off in 12 years.

Into these cottages the lying-in patients should be admitted by an entrance at Palace-row. Your lying-in patients now only average about 37 in hospital at the same time, and 60 beds would afford an ample supply to secure the proper cleansing and ventilation between each fresh admission. By this means, and the never having more than two patients and one nurse under each roof, there can be little doubt that puerperal fever would, if not banished, merely show itself in the same proportion of cases, and only prove as fatal as it is observed in private practice. These buildings might be constructed in the style of the cottage ornèe, and have the effect of a Swiss chalet, as seen from the houses in the square, proving rather an ornament than otherwise.

You were good enough, my lords and gentlemen, to accede to the resolution I proposed, and directed that your Master should afford assistance to all poor lying-in women who required obstetrical attendance in their own homes, and also that a registry should be kept of those so attended. It is gratifying to find that this plan has been in successful operation, and is fully appreciated by those patients who have taken advantage of it.

As exception has been taken by the learned Professor, Sir. J. Simpson, of Edinburgh, to the preference reserved in the charter for those who have served the office of assistant in the election of a master, we deem it due to the Founder's memory, and the interests of the Hospital, to dwell upon the importance of this provision being strictly adhered to. Nothing more clearly evinces the astuteness and wisdom of Mosse than its inculcation.

We decline to base his motives upon the lower ground of merely encouraging his own alumni, and holding out the important, and, as it has transpired, most lucrative office of master, as a reward and motive to exertion in the great school he was founding. This, no doubt, may have influenced him to a certain extent, and with perfect justice. If his reason for making such a provision was this, his arrangement should be respected, and his wish in this, his will and

testament, to provide for his own, should be disturbed by no rude hand. But Mosse's motives were far deeper, broader, more catholic. The founder of such an institution, to his own impoverishment, was influenced by no narrow or exclusive motives in selecting a physician to be intrusted with the charge of the institution for which he had sunk his all; the establishment of which had been the labour of a life; and the sustentation of which, in the highest efficiency when he passed away, was no doubt the first object of his care. Mosse, himself a physician accoucheur in large practice, knew well that a man may succeed to a large practice, be a popular physician—nay, even sustain a reputation as a writer and improver of his art, and yet not be either a safe or a sound physician accoucheur, or such an one as he would feel justified in entrusting with the lives of the patients in his darling Institution, or with the instruction of the pupils of that medical school he was engaged in establishing. He knew that the opportunities of study within his Institution would be unequalled. He knew that the extent of observation enjoyed by a physician in however extensive practice could only be counted by fifties, whilst those to be enjoyed in his hospital would be counted by thousands. He knew that in midwifery practice especially, the varieties were so sparse that their numerical proportion rendered it impossible to be conversant with them *all* unless in a large hospital or great maternity; and that even at the end of a long life, several of them might be left unseen by the private practitioner. He knew that he did not want a master who was only acquiring his experience when he was past his work, but one whose ample opportunities—whilst his youth and vigour remained—secured his fitness to undertake so arduous a trust. All these matters he was fully conversant with; and he concluded, and most wisely concluded, that nothing better secured this than making a master, before his election, serve an apprenticeship as pupil and assistant in the largest available field of observation.

It now remains to be considered to what purpose the great hospital and the auxiliary hospital should be applied, and this consideration involves the last two objects set forth by the founder in the preamble—the preventing gentlemen going abroad for instruction, and the supplying duly qualified women as labour nurses throughout the kingdom.

In no manner could the former object be so satisfactorily and carefully carried out as by extending the principles of your present diseases of female ward, and appropriating several additional wards

to this purpose, and two, if possible, to diseases (not contagious) of children. The results that have already followed your twenty-eight years' adoption of this plan fully justify its extension; and this, together with a large increase of attendance of labour cases at their own homes, and the attendance on the hospital patients in the detached cottages, would afford facilities to the obstetrical student that Mosse himself would have been satisfied with.

I have now only to report to your Board in reference to the remaining object of our founder, that of facilitating the instruction of qualified women to practice throughout the kingdom, that I waited upon Mr. Power and Dr. M'Donnel, the Poor Law Commissioners, who expressed themselves as much gratified at the resolution of the Board to admit women for instruction to be sent up by the Poor Law Unions on the payment of £5. But although they fully felt the great want that exists for a supply of midwives, and how great an object it is to obtain them, they regretted that the state of the law is not such as to authorize them to require the unions to present even £5 for this purpose. It therefore remains for us to consider whether, after existing interests lapse, arrangements may not be made before a new election of officers, by which this portion of the master's fee be not also discontinued, as the present master so liberally yielded the other portion.

As no part of our trust is more important than affording an increased supply of educated midwives, the arrangements proposed above will place the auxiliary hospital, and some wards of the great hospital, at our disposal for the purpose of accommodating any additional number we may require, and thus every requirement of the charter will be complied with. By first accommodating every patient who prefers being admitted to hospital, in wards so constructed as to afford them every comfort and advantage without incurring the risk from puerperal fever; by affording home attendance to every one that applies; by establishing an additional number of wards for those diseases incidental to parturition, and the female specially; by enlarging the opportunities for the male student, so as to make it a perfect obstetrical school; by doing the same for the female student, and thus increasing the supply of well qualified midwives throughout the country.

It might be necessary in carrying out these suggestions to add to the medical staff of the hospital, as the master and assistants would be unable to devote the time necessary; for instance, an additional assistant might be necessary. The consulting physician

and surgeon, in place of being as they are at present, sinecure officers, would have to undertake the hospital duties, and possibly additional physicians and surgeons might be appointed to take alternate periods of duty.

The surgeons and physicians should be required to deliver clinical lectures to the pupils upon their cases. The female pupils admitted should be of a better instructed class than those hitherto sent up from the country, and a higher grade of educated females might be admitted, who, after undergoing a more protracted attendance at the hospital, and probably at lectures of a higher character, might, on examination, obtain a higher certificate of fitness in their walk. This would induce a superior class of women to enter upon the duties of nurse, and prove a great boon to the female population of this country.

You were good enough, in the year 1839, to approve of my establishing within the walls of this hospital, a society for the encouragement and spread of obstetrical knowledge, open to all persons devoted to these inquiries. I have now the gratification of informing you that the Dublin Obstetrical Society, established under your auspices, has developed into a national institution of European reputation—numbering amongst its members many of the most distinguished improvers of our art at home and abroad. That it has assisted in carrying out the designs of your founder, not exactly as he expresses it, by preventing such gentlemen as mean to practice midwifery from going abroad for instruction, but by drawing many gentlemen from abroad here for that laudable purpose.

The gross annual income of your hospital, as you are aware, amounts to about £3,600; but, on deducting debenture interest, flagging the square, and the Rotunda expenses, the net available income may be stated at £2,600. The time has arrived, in anticipation of the modifications above proposed, for inquiring how the funds of the hospital can be increased, and no time could be more opportune than the present. The Board could not contemplate any interference with vested rights; yet there is a prevalent conviction that the fees of the pupils and assistants should in this as in other hospitals, be appropriated in part or in whole to its maintenance. In support of this view, it is assumed that the reputation gained by the Mastership is of itself sufficient remuneration for his services, and that if it were not directly remunerative in a pecuniary point of view, physicians advanced in life would not seek it as a means merely of money making, whilst the competition would

remain amongst younger men, who, whilst they possessed sufficient experience, would be influenced in their devoting their energies to work and improve it for the sake of the reputation to be acquired.

There is much reason in this latter view; but I should hesitate in recommending any alteration that would prevent the ablest men in the profession from looking to it as an object of ambition. It must be recollected, also, that it is an arduous charge, requiring a large proportion of time and residence. It must also be borne in mind that upon the exertions and attention of the master depends the supply of funds to the hospital as well as the number of his pupils. So that he should have a direct interest in increasing both.

Perhaps the most equitable and the most effective manner of dealing with this branch of our question would be to allow all the proceeds under the head of fees for instruction to be divided equally between the Master and hospital. As the ensuing year is the last for which the present Master can be elected, if such an arrangement were adopted, it could not come into operation until the eve of the new election for Master. This would not in any way interfere with vested rights, as the candidates would be purchasers with notice; and, whilst it would enrich the institution by about £500 a-year, it would not lessen by one individual the number of candidates seeking for the appointment.

I have already drawn the attention of the Board to the increase of certain items of expenditure in which a further saving might be effected; and I have little doubt that when we show the public our readiness to make the institution entrusted to our care worthy of their support, that encouragement on their part will prove equivalent to our exertions.

I have now merely to state that I transmit this letter for your perusal previous to the meeting of the Governors, which will take place at the Rotunda Hospital at 3 o'clock on the first Friday in November, when it is my intention to draw the attention of the Governors to the propositions herein contained, in the confident hope that so far as they are deserving of your attention they will obtain your support; and thanking you most sincerely for the attention with which my suggestions have always been considered by your Board, I have the honour to remain, your Excellency, my Lords, and Gentlemen,

Your obedient servant,

EVORY KENNEDY.

1, Upper Merrion-street, Dublin.

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